

Ref

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

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OPINION 338

Acceptance of the Mesozoic Fossil species *Gryphaea arcuata* Lamarck, 1801, as the type species of the nominal genus *Gryphaea* Lamarck, 1801, and addition of the generic name *Gryphaea* Lamarck, 1801 (Class Pelecypoda) to the *Official List of Generic Names in Zoology*.



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INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

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OPINION 338

ACCEPTANCE OF THE MESOZOIC FOSSIL SPECIES
“GRYPHAEA ARCUATA” LAMARCK, 1801, AS THE
TYPE SPECIES OF THE NOMINAL GENUS
“GRYPHAEA” LAMARCK, 1801, AND
ADDITION OF THE GENERIC NAME
“GRYPHAEA” LAMARCK, 1801
(CLASS PELECYPODA), TO THE
“OFFICIAL LIST OF GENERIC
NAMES IN ZOOLOGY”

RULING :—(1)(a) Under Article 25 of the *Règles*, the generic name *Gryphaea* Lamarck possesses availability for the purposes of the Law of Priority as from the date of its publication in 1801 in the *Système des Animaux sans Vertèbres*. (b) The selection by Children (1823) of *Gryphaea angulata* Lamarck as the type species of the foregoing nominal genus is invalid, since at the time of the publication of the name *Gryphaea* Lamarck, 1801, the name *Gryphaea angulata* Lamarck was a *nomen nudum* and was not published, with an indication, for the Recent species to which it is applicable until 1819. (c) The type species of *Gryphaea* Lamarck, 1801, is the Mesozoic Fossil species *Gryphaea arcuata* Lamarck, 1801, by selection by Anton (1839).

(2) The nominal species *Gryphaea angulata* Lamarck, 1819, is not the type species of any nominal genus, but the generic name *Crassostrea* Sacco, 1897, is available for use for that species by those specialists who regard it as congeneric with *Ostrea virginica* Gmelin, [1790] (the type species of *Crassostrea* Sacco) and who do not refer both species to the genus *Ostrea* Linnaeus, 1758.

(3) Under the Plenary Powers, the specific name *gryphus* Linnaeus, 1758, as published in the combination *Anomia gryphus*, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(4) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* with the Name Nos. 843 and 844 respectively :—

- (a) *Gryphaea* Lamarck, 1801 (gender : feminine) (type species, by selection by Anton (1839) : *Gryphaea arcuata* Lamarck, 1801) ;
- (b) *Crassostrea* Sacco, 1897 (gender : feminine) (type species, by original designation : *Ostrea virginica* Gmelin, [1790] (a name incorrectly cited by Sacco as *virginiana*) for use by those specialists who consider *Ostrea virginica* Gmelin, [1790], generically distinct from *Ostrea edulis* Linnaeus, 1758, the type species of *Ostrea* Linnaeus, 1758) ;

(5) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* with the Name Nos. 447 to 450 respectively :—

- (a) *arcuata* Lamarck, 1801, as published in the combination *Gryphaea arcuata*, the species so named to be interpreted by the lectotype selection made by Cox (1951 : 326) (specific name of type species of *Gryphaea* Lamarck, 1801) ;
- (b) *obliquata* Sowerby (J.), 1815, as published in the combination *Gryphaea obliquata* ;
- (c) *angulata* Lamarck, 1819, as published in the combination *Gryphaea angulata* ;
- (d) *virginica* Gmelin, [1790], as published in the combination *Ostrea virginica* (specific name of type species of *Crassostrea* Sacco, 1897) ;

(6) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* with the Name Nos. 233 and 234 respectively :—

- (a) *Liogryphaea* Fischer (P.H.), 1885 (a junior objective synonym of *Gryphaea* Lamarck, 1801, the two nominal genera having the same species as type species) :
- (b) *Liogryphea* Douvillé, 1904 (an Erroneous Subsequent Spelling of *Liogryphaea* Fischer (P.H.), 1885) ;

(7) The under-mentioned specific names are hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* with the Name Nos. 115 to 117 respectively :—

- (a) *angulata* Lamarck, 1801, as published in the combination *Gryphaea angulata* (a *nomen nudum*) ;
- (b) *gryphus* Linnaeus, 1758, as published in the combination *Anomia gryphus*, as suppressed under the Plenary Powers under (3) above ;
- (c) *virginiana* Röding, 1798, as published in the combination *Ostrea virginiana* (an Erroneous Subsequent Spelling of *virginica* Gmelin, [1790], as published in the combination *Ostrea virginica*).

I.—THE STATEMENT OF THE CASE

The problem associated with the name *Gryphaea* Lamarck was placed before the International Commission on Zoological Nomenclature by M. Gilbert Ranson (*Sous-Directeur du Laboratoire de Malacologie, Muséum National d'Histoire Naturelle, Paris*)

at a Public Meeting of the International Commission held, jointly with the Section on Nomenclature of the Thirteenth International Congress of Zoology, Paris, 1948, at the Sorbonne in the Amphithéâtre Louis-Liard on Monday, 26th July 1948. This application was as follows :—

Quelle est l'espèce type du genre "Gryphaea" Lamarck ?

Par GILBERT RANSON (*France*)

1. Ce sujet a fait l'objet de maintes discussions. Il est néanmoins nécessaire d'y revenir parce qu'un accord n'a pu encore se faire entre les auteurs.

2. En 1801, dans "l'Addition" à son *Système des Animaux Sans Vertèbres*, Lamarck créa le Genre *Gryphaea*. Dans l'Avertissement à ce *Système*, l'auteur dit : "Pour faire connaître d'une manière certaine les genres dont je donne ici les caractères, j'ai cité sous chacun d'eux une espèce connue, ou très rarement plusieurs, et j'y ai joint quelques synonymes que je puis certifier ; cela suffit pour me faire comprendre."

3. Pour le genre *Gryphaea*, Lamarck cite les espèces suivantes :—

Gryphaea angulata Lmk.
Gryphaea suborbiculata Lmk.
Gryphaea cymbula Lmk.
Gryphaea arcuata Lmk.
Gryphaea africana Lmk.
Gryphaea carinata Lmk.
Gryphaea latissima Lmk.
Gryphaea depressa Lmk.
Gryphaea angusta Lmk.

4. Il ajoute en Nota : ". . . Dans mon tableau général des espèces, je caractériserai toutes celles dont je donne ici simplement le nom." Lamarck considérait donc cette liste comme provisoire et il semble bien, d'après les citations qui viennent d'être faites, qu'il n'accordait qu'une valeur "d'exemples" aux espèces citées.

5. La notion de "type" n'était pas encore conçue à cette époque. Mais dès 1823, nous voyons Children sélectionner les "types" de l'*Histoire Naturelle des Animaux Sans Vertèbres*.

6. Malgré tout, Lamarck donne comme premier exemple de son genre, l'espèce *Gryphaea angulata*. Il ne fait pas de doute que Lamarck le créa après l'examen de l'unique exemplaire de cette espèce qu'il venait de recevoir. Cet échantillon se trouve actuellement dans les collections du Muséum du Paris et a été figuré par Delessert en 1841.

7. En effet, en 1819, dans son *Histoire Naturelle des Animaux Sans Vertèbres*, Lamarck décrit comme première espèce du genre, *Gryphaea angulata* Lmk. Mais en ce qui concerne les autres espèces, la plupart des noms originaux sont modifiés et trois autres espèces introduites. Voici les noms correspondant aux espèces citées en 1801 :—

Gryphaea angulata Lmk.
Gryphaea columba Lmk.
Gryphaea cymbium Lmk.
Gryphaea arcuata Lmk.
Gryphaea secunda Lmk.
Gryphaea plicata Lmk.
Gryphaea latissima Lmk.
Gryphaea silicea Lmk.
Gryphaea angusta Lmk.

8. Entre 1801 et 1819 plusieurs auteurs ont publié des travaux sur les Mollusques, se référant aux Huîtres : Bosc en 1802, Roissy en 1805 et Cuvier en 1817. Mais ces auteurs ne sélectionnent pas de "types" et citent seulement des exemples. Il ne peut être tenu compte de ces travaux pour fixer le "type" du genre *Gryphaea*. Finlay, en 1928, remarque judicieusement que le fait de citer ou même de figurer un échantillon d'un genre n'est pas retenu par les règles pour être la sélection définie d'un "type".

9. Ainsi nous sommes amenés au travail de Children (1823) où, pour la première fois, *Gryphaea angulata* est désigné comme "type" du genre.

10. Cependant M. Winckworth, de Londres, me fait remarquer dans une lettre que Children se réfère à l'*Histoire Naturelle* de 1819 et non au *Système* de 1801 ; cette sélection du "type" ne serait donc pas valable. Il ajoute "the next selection of type is by Anton (1839), where *G. arcuata* is given as type (compare page VI, where he says that he prints the type species of each genus in small capital print)".

11. La question se pose donc maintenant de savoir si le "type" du genre *Gryphaea* doit être pris dans le *Système des Animaux Sans Vertèbres* (1801) ou dans l'*Histoire Naturelle des Animaux Sans Vertèbres* (1819). S'il doit être sélectionné dans le *Système* nous nous

trouvons en présence du fait suivant : d'après nos conceptions modernes de la nomenclature, *Gryphaea angulata*, première espèce citée par Lamarck, n'y étant ni décrite ni figurée, est un *nomen nudum*. Il importe donc de prendre comme "type" la première espèce suivante bien décrite ou bien figurée dans les références données par Lamarck. C'est pourquoi les auteurs ont choisi *G. arcuata* Lmk.

12. Mais peut-on prendre en considération le *Système* pour sélectionner des "types" ? Cette question a été soulevée à diverses reprises et posée à la Commission Internationale de Nomenclature Zoologique. Dans deux de ses *Opinions* (79 et 81) cette Commission répond négativement et se résume ainsi : "Rigidly construed, Lamarck's (1801 A) *Système des Animaux sans Vertèbres* is not accepted as designation of type species." s'expliquant de la manière suivante dans l'*Opinion* 79 : "In the view of the Commission, Lamarck cites a 'known species or very rarely several' as examples, in order to illustrate the genera, but rigidly construed, he does not fix the types. This interpretation is supported by an examination of Lamarck's (1816 b) *Histoire Naturelle des Animaux Sans Vertèbres*, in which he does not even cite certain species mentioned in 1801. For instance, in 1801, p. 293, he cites only *P. rufipes* under *Pentatoma* ; if he had intended this as a type designation he would, presumably, have cited this species under *Pentatoma* in 1816 b, 492—494, but he does not do so ; he stated that *Pentatoma* contains a large number of species, of which he cites : *acuminata*, *baccarum* and *prasina* "".

13. En ce qui concerne le genre *Gryphaea*, si Lamarck a cité chaque fois en première ligne l'espèce *Gryphaea angulata*, il a modifié les noms de la plupart des espèces suivantes de la liste de 1801. Il est donc bien osé de choisir parmi les autres espèces celle devant être prise comme "type".

14. D'autre part Lamarck a non seulement changé les noms de certaines espèces mais il a modifié les références pour deux d'entre elles. C'est ainsi qu'en 1801 on trouve :—

<i>Gryphaea cymbula</i> n.	Knorr, Pétrif. Vol. 2è, part 1, pl. 20, fig. 7, Esp. fossile.
<i>Gryphaea arcuata</i> n.	Encyclop. pl. 189, fig. 1, 2. Knorr, Pétrif. Vol. 2è, p. 1, pl. 60, fig. 1, 2. Bourg. Pétrif. No. 92, Esp. fossile.

Et en 1819 :—

<i>Gryphaea cymbium</i> .	Knorr, Pétrif. part 2, B.I., d., pl. 20, fig. 7. Encyclop. pl. 189, fig. 1, 2.
<i>Gryphaea arcuata</i> .	Bourguet, Pétrif. pl. 15, No. 92. Knorr, Pétrif. part 2, D III, pl. 60, fig. 1, 2.
<i>Gryphaea incurva</i> .	Sowerby, Conch. Min. No. 20, t.112, f.1.

La référence, en 1801, de *G. arcuata* à l'*Encyclopédie* est passée, en 1819, à *G. cymbium*. On ne peut donc pas dire qu'en 1801 le *G. arcuata* de Lamarck soit bien défini.

15. Pour toutes ces raisons nous ne devons donc pas choisir le type de *Gryphaea* dans le *Système* de Lamarck, mais dans son *Histoire Naturelle* comme l'a fait Children en 1823. Cet auteur est le premier à avoir désigné *Gryphaea angulata* Lmk. comme type du genre.

16. Nous ne pouvons pas suivre Dall qui, en 1898, ne semblant pas connaître le travail d'Anton, sélectionne de nouveau *G. arcuata* comme type. *Gryphaea arcuata* Lmk. est le type du genre *Liogryphaea* P. Fischer, 1886.

Bibliographie

- 1801—Lamarck. *Système des Animaux sans Vertèbres*.
 1802—Bosc, L. A. G. *Histoire Naturelle des Coquilles*, T.II.
 1805—Roissy. *Histoire Naturelle des Mollusques*, T.VI.
 1817—Cuvier. *Règne Animal*.
 1819—Lamarck. *Histoire Naturelle des Animaux sans Vertèbres*, T.VI.
 1823—Children. Lamarck's Genera of shells. Art. V. *Quart. J. Sc. Lit. and Arts*, Vol. 15.
 1839—Anton. *Verzeichniss der Conchylien*.
 1886—Fischer, P. *Manuel de Conchyliologie*.
 1898—Dall, W. H. Contributions to the tertiary Fauna of Florida. Part IV. *Trans. Wagner Free Institute of Sc. of Philadelphia*, Vol. 3, Part IV.
 1924—Opinions rendered by the International Commission on Zoological Nomenclature. *Opinions* 78 to 81 (publication 2747). *Smithsonian Miscellaneous Collections*, Vol. 73, No. 2.
 1929—Finlay, H. J. The recent Mollusca of the Chatham Islands. *Trans. and Proceed. New Zealand Institute*, Vol. 59.

2. Registration of the present application : Upon the receipt shortly before the Paris (1948) Congress of notice of M. Ranson's intention to raise at the Congress the question of the generic name *Gryphaea* Lamarck, this problem was allotted the Registered Number Z.N.(S.) 365.

II.—THE SUBSEQUENT HISTORY OF THE CASE

3. Adjournment of the present application at Paris in 1948 for further investigation : At the joint meeting of the International Commission and the Section of Nomenclature of the Paris (1948) Congress at which the present application was presented by M. Ranson, a brief discussion took place at which, as recorded in the Official Record of the Proceedings of the Section on Nomenclature (1950, *Bull. zool. Nomencl.* **5** : 96—98), Mr. R. Winckworth took exception to the proposal on the ground that at the date (1801) when the name *Gryphaea* was first published by Lamarck, the nominal species *Gryphaea angulata* Lamarck which M. Ranson asked should be accepted as the type species of this genus was still undescribed, the name *Gryphaea angulata* Lamarck being at that time a *nomen nudum*. At the conclusion of this discussion, the President of the Section on Nomenclature (Mr. Francis Hemming), when thanking M. Ranson for bringing forward this case, expressed the view that this was not a matter on which the Section could itself pronounce an opinion and that it would be necessary that the problem involved should be referred to the International Commission for consideration and decision (1950, *ibid.* **5** : 97—98). The Commission thereupon agreed to defer the further consideration of this case until after the close of the Paris Congress (1950, *ibid.* **4** : 306—307).

4. Publication of the present application : At the last Meeting of the Section on Nomenclature of the Paris (1948) Congress, it was decided to invite the International Trust for Zoological Nomenclature to undertake financial and other responsibility for the publication in the *Bulletin of Zoological Nomenclature* of the Official Records of the discussions on zoological nomenclature held during the Paris Congress (1950, *Bull. zool. Nomencl.* **4** : 642—644). This invitation was accepted by the Trust. When later the Trust considered how best to give effect to the undertaking which it had given in this matter, it decided to allot for this purpose three volumes of the *Bulletin of Zoological Nomenclature*, the first (vol. 3) to be devoted to the documents on nomenclature submitted to the Commission and the Congress, the second and third (volumes 4 and 5) being devoted to the Official Record of the Proceedings of the Commission during its Paris Session and

of those of the Section on Nomenclature respectively. All three of these volumes were published by the Trust in 1950, the paper submitted by M. Ranson in regard to the name *Gryphaea* appearing in the first of these volumes (Ranson, 1950, *Bull. zool. Nomencl.* 3 : 168—170).

5. Issue of Public Notices in 1951 : On the completion in 1950 of the publication of the Official Records of the discussions on nomenclature at the Paris Congress, the International Trust was able to resume the publication in the *Bulletin of Zoological Nomenclature* of applications submitted to the International Commission for decision. The first instalment of these applications was published in the course of the years 1950 and 1951 in volume 2 of the *Bulletin* (a volume which had been reserved for this purpose at the time when it was decided to allot volumes 3, 4 and 5 to the Paris records). In view of the fact that (as has already been explained) the present application had been published in 1950 in volume 3 of the *Bulletin*, it was not considered necessary to republish it in a volume specially reserved for new applications. On the other hand, it was felt that the publication of this application in volume 3 of the *Bulletin*, together with the other documents received by the Commission when sitting in Paris in 1948, might not secure for it the desired degree of publicity unless some appropriate supplementary action were taken. It was accordingly decided to include in volume 2 of the *Bulletin* a special note drawing attention to this application and pointing out the nature of the action which it would be necessary for the Commission to take if it were to approve the solution sought by M. Ranson, namely, that it would be necessary for the Commission to use its Plenary Powers to suppress the name *Gryphaea* Lamarck, 1801, and all later uses of this name prior to Lamarck, 1819, this being the only way by which it would be possible to secure that, as desired by M. Ranson, the genus so named should have the Recent species *Gryphaea angulata* Lamarck, 1819, as its type species. It was decided also that at the same time Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in this case (thereby placing the Commission in a position to grant M. Ranson's application, if it were to decide that it was desirable so to do) should be given to the serial publications prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool.*

Nomencl. 4 : 51—56). In compliance with the foregoing decision Mr. Francis Hemming, as Secretary to the Commission, prepared the following paper, which was published on 4th May 1951 in Triple-Part 6/8 of volume 2 of the *Bulletin of Zoological Nomenclature* (Hemming, 1951, *Bull. zool. Nomencl.* 2 : 239—240), in which Part also Public Notice of the possible use of the Plenary Powers in this case was given in the prescribed manner, similar Notice being given at the same time to the other prescribed serial publications and, in addition, to certain other zoological and palaeontological serial publications in Europe and America :—

On an application, the grant of which would require that the name “Gryphaea” Lamarck, 1801, should be suppressed, under the Plenary Powers, thus validating the name “Gryphaea” Lamarck, 1819 (Class Pelecypoda)

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

1. Attention is drawn to a request submitted by M. Gilbert Ranson to the International Commission on Zoological Nomenclature at its Session held in Paris in 1948, in which he asked the Commission to give a ruling (1) that the generic name *Gryphaea* Lamarck ranks for purposes of zoological nomenclature from 1819 not from 1801 (the year in which it was first published) and (2) that the type species of this genus is *Gryphaea angulata* Lamarck, 1819 (*Hist. nat. Anim. sans Vertèbr.* 6(1) : 198). The text of M. Ranson's application has been published by the Commission (1950, *Bull. zool. Nomencl.* 3 : 168—170), as also has been the *Official Record of Proceedings* at the Meeting of the International Commission at which M. Ranson's application was presented (1950, *Bull. zool. Nomencl.* 4 : 306) and that of the Meeting of the Section on Nomenclature of the Thirteenth International Congress of Zoology held concurrently with the meeting of the Commission (1950, *Bull. zool. Nomencl.* 5 : 96—98).

2. Mr. R. Winckworth pointed out at that meeting that the generic name *Gryphaea* Lamarck, 1801 (*Syst. Anim. sans Vertèbr.* : 398) was published with a diagnosis and therefore that this name, so published, satisfies the requirements of Article 25 of the *Règles*. On the above occasion Lamarck cited, under this generic name, the names of nine nominal species ; several of those names were at that time *nomina nuda*, but others were validated by the citation of bibliographical references. Under the *Règles*, therefore, these latter species alone are eligible for

selection as the type species of this genus. One of these nominal species, *Gryphaea arcuata* Lamarck, 1801 (*loc. cit.* : 398), was selected as the type species of this genus by Anton in 1839 (*Verz. Conchyl.* : 21). This being the first occasion on which any of originally included species was so selected, the Fossil species *Gryphaea arcuata* Lamarck, 1801, is under the *Règles* the type species of the genus *Gryphaea* Lamarck, 1801.

3. M. Ranson has made it clear in his application that he considers it important that the name *Gryphaea* Lamarck should be accepted as the generic name for the Recent species *Gryphaea angulata* Lamarck, 1819 ; this species was so selected by Children (1823). This type selection, though prior to that by Anton, is invalid, since at the time when in 1801 the generic name *Gryphaea* was first validly published by Lamarck, the name *Gryphaea angulata*, then cited by Lamarck, was a mere *nomen nudum* and accordingly does not rank as an originally included species and is ineligible for selection by a later author to be the type species of the genus in question. In presenting this problem to the International Commission, M. Ranson argued in favour of the acceptance of the *Histoire Naturelle* of 1819 in place of the *Système* of 1801 as the work as from which the type species of the genus *Gryphaea* Lamarck should be chosen. In advancing this view, M. Ranson did not ask that the International Commission should use its Plenary Powers to secure the end that he had in view but sought to show that it would be permissible, under the normal operation of the *Règles*, to disregard the *Système* of 1801. As Mr. Winckworth has shown, this would, however, not be possible. Nevertheless, if the majority of interested specialists were to favour the end sought by M. Ranson, namely the acceptance of *Gryphaea angulata* Lamarck, 1819, as the type species of the nominal genus *Gryphaea* Lamarck, a solution in that sense could readily be provided by the International Commission by the use of its Plenary Powers.

4. The issue which, in effect, the International Commission is asked to decide is :—

- (1) whether the normal provisions of the *Règles* are to be allowed to operate in the present case, with the result that the generic name *Gryphaea* would rank from Lamarck, 1801, and would have, as its type species, the Fossil species, *Gryphaea arcuata* Lamarck, 1801 (by selection by Anton, 1839) ; or
- (2) whether the Plenary Powers should be used to suppress the name *Gryphaea* Lamarck, 1801, and all uses of that generic name from 1801 to the date in 1819, when it was republished by Lamarck in the *Hist. nat. Anim. sans Vertèbr.*, the name *Gryphaea* Lamarck, 1819 (so validated) having, as its type species, the Recent species *Gryphaea angulata* Lamarck, 1819 (by selection by Children, 1823).

5. As the application submitted in this matter by M. Ranson is of direct concern to palaeontologists as well as to zoologists, the International Commission, before reaching a decision, will be anxious to be fully informed of the wishes of interested specialists in both Fossil and Recent species of the group concerned.

6. The object of the present note is to draw attention to the problem which has been submitted to the International Commission and to invite interested specialists to be good enough to furnish the Commission as soon as possible with their views on that problem and on the best means of solving it. Communications on this subject should be addressed to the Secretary to the International Commission on Zoological Nomenclature, Secretariat of the Commission, 28 Park Village East, Regent's Park, London, N.W.1, England.

6. Comments received in regard to the present case : The publication in May 1951 of Mr. Hemming's note (paragraph 5 above) drawing attention to M. Ranson's application and inviting interested specialists to furnish the Commission with statements of their views as to the action which it was desirable should be taken in this case attracted a great amount of attention, no less than thirty-three specialists taking part. At an early stage one of these specialists, Dr. L. R. Cox (*British Museum (Natural History), London*) submitted a counter-proposal, namely that the *Règles* should be applied, without intervention of the Plenary Powers, in the matter of the species to be accepted as the type species of the genus *Gryphaea* Lamarck, and therefore that this generic name should rank from Lamarck's *Syst. Anim. sans Vertèbr.* of 1801, and that the Mesozoic Fossil species *Gryphaea arcuata* Lamarck, 1801, should be accepted as the type species of this genus (Cox, Sept. 1951, *Bull. zool. Nomencl.* **2** : 324). It was then arranged between the Secretary and M. Ranson that facilities should be given for the publication in the *Bulletin* of a note by M. Ranson setting out the grounds which prompted him to dissent from the view expressed by Dr. Cox. M. Ranson's rejoinder was submitted on 28th January 1952 and was published on 22nd May 1952 (Ranson, 1952, *Bull. zool. Nomencl.* **6** : 205—206, 1 pl.). Of the remaining thirty-one specialists, all either (1) supported the adoption of the Recent species *Gryphaea angulata* Lamarck, 1819, as the type species of the genus *Gryphaea* (the Ranson proposal) or (2) supported the adoption of the Mesozoic Fossil species *Gryphaea arcuata* Lamarck, 1801, as the

type species of that genus (the Cox counter-proposal). The names of the specialists who furnished these comments are set out in the annexe to the paper reproduced in paragraph 8 below, which the Secretary to the Commission submitted to the Commission at the time of the commencement of the vote on the present case. The list so furnished by the Secretary gives the volume and page references to the places where these comments were published in the *Bulletin of Zoological Nomenclature* on various dates in 1951 and 1952. The comments received are reproduced in full in the Appendix to the present *Opinion*.

7. Completion in 1952 of the material needed to enable the Commission to give a Ruling in favour either of the Ranson proposal or of the Cox counter-proposal : In the summer of 1952 consideration was given by the Secretary to the form of the Ruling which the Commission would need to give if it were to decide in favour of the Ranson proposal or, alternatively, if it were to decide in favour of the Cox counter-proposal. It was then found that, although both M. Ranson and Dr. Cox had indicated clearly the action which they respectively advocated, neither had supplied all the information which would be needed by the Commission in the event of the rejection of the proposals they had respectively submitted. Correspondence accordingly ensued between the Secretary to the Commission and M. Ranson and Dr. Cox, as the result of which the necessary information was obtained and agreement secured as to the action which would be needed in the event of the rejection by the Commission of the proposals submitted by those specialists. By the time that this correspondence was completed, the near approach of the Fourteenth International Congress of Zoology, Copenhagen, 1953, and of the Colloquium on Zoological Nomenclature to be held concurrently with the Congress then being organised by the International Trust for Zoological Nomenclature made it essential for the time being to postpone further action on individual cases, in order that the entire resources of the Secretariat of the Commission might be concentrated upon the preparations for the Copenhagen Meetings.

8. Submission to the Commission in February 1954 of alternative proposals for the adoption either of the Ranson proposal

or of the Cox counter-proposal : On 27th February 1954 the Secretary to the Commission submitted to the Commission the following paper in which he gave a brief summary of the issues involved in the present case and of the arrangements which he had concerted with M. Ranson and Dr. Cox in regard to the form in which their respective proposals should be placed before the Commission. As will be seen, Mr. Hemming added also (in an annexe to his note) a complete list of the specialists who had furnished comments on this case, giving at the same time bibliographical references to the places where those comments had been published in the *Bulletin of Zoological Nomenclature*.

The "Gryphaea" case : an Explanatory Note

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

The central issue in the present case is extremely simple ; it is : (1) Shall the generic name *Gryphaea* Lamarck be used for the Mesozoic Fossil Species *Gryphaea arcuata* Lamarck, 1801, in accordance with the practice of palaeontologists ? OR (2) Shall the name *Gryphaea* Lamarck be used for the Recent Species *Gryphaea angulata* Lamarck, 1819 (the Portuguese Oyster), in accordance with a usage which is current among those neontologists who consider that species generically separable from *Ostrea* Linnaeus, 1758 ?

2. Under the *Règles* (a) the generic name *Gryphaea* dates from Lamarck, 1801, and its type species is the Mesozoic Fossil Species *Gryphaea arcuata* Lamarck, 1801, by selection by Anton (1839).

3. There are two applications in this case, namely (1) an application by M. Gilbert Ranson that under the Plenary Powers *Gryphaea* should rank from Lamarck, 1819, in which case its type species would be the Recent Species *Gryphaea angulata* Lamarck, 1819, by selection by Children (1823) ; (2) a counter-application by Dr. L. R. Cox that the *Règles* should be strictly applied in this case and therefore that *Gryphaea* should rank from Lamarck, 1801 (the year in which it was first validly published) and that *Gryphaea arcuata* Lamarck, 1801, the Mesozoic Fossil Species which is the type species under the *Règles*, should be accepted as such. The papers concerned are : (1) Ranson (1950 *Bull. zool. Nomencl.* 3 : 168—170) (a paper in which M. Ranson argued that the first valid publication of the name *Gryphaea* was by

Lamarck, 1819, not 1801); (2) Hemming (1951, *ibid.* 2 : 239—240) (a paper in which I pointed out that under the *Règles* the name *Gryphaea* dates from Lamarck, 1801, and that its type species is *Gryphaea arcuata* Lamarck, 1801, and that, if M. Ranson's object was to be achieved, the Plenary Powers would need to be used); (3) Cox (1951, *ibid.* 2 : 324—331) (in which exception was taken to M. Ranson's proposal, and the Commission was asked to refuse to use its Plenary Powers in the manner needed to give effect to M. Ranson's proposal); (4) Ranson (1952, *ibid.* 6 : 205—206) (a paper in which, in answer to Dr. Cox, M. Ranson re-stated his former view as to the non-acceptability of Lamarck, 1801, but added that, if this argument was not accepted, he desired that the Commission should use its Plenary Powers to rule that the name *Gryphaea* should rank from Lamarck, 1819, instead of 1801, and that *Gryphaea angulata* Lamarck, 1819, should be accepted as its type species).

4. The publication of the foregoing papers elicited a large number of comments on one side or the other. A list of these comments, all of which, except two, have been published in the *Bulletin*, is given in an Appendix attached to the present note.

5. Under a General Directive issued by the Thirteenth International Congress of Zoology, Paris, 1948, the Commission is under instructions to secure that Rulings given by it in *Opinions* cover the whole of the problem submitted. From this point of view, both M. Ranson's application and Dr. Cox's counter-application are incomplete, for (1) M. Ranson submitted no proposals as to the action required for stabilising the generic name for the Recent Species *Gryphaea angulata* Lamarck, 1801, in the event of the Commission rejecting his proposal that the Commission should accept that species as the type species of the genus *Gryphaea* Lamarck, while (2) Dr. Cox's application contained no proposal for stabilising the generic name for the Mesozoic Fossil Species *Gryphaea arcuata* Lamarck, 1801, in the event of the Commission rejecting his proposal that this species should be retained as the type species of the genus *Gryphaea* Lamarck, 1801. Accordingly, in preparation for the submission of the present case to the Commission, I entered into correspondence with M. Ranson and Dr. Cox for the purpose of agreeing with each of them the action which would be necessary in the event of the rejection by the Commission of the application submitted. I am most grateful to these specialists for the assistance which they have been good enough to give in this matter, assistance which has made it possible for me now to submit alternative solutions for the present problem, each of which has been agreed both with M. Ranson and with Dr. Cox from their respective points of view.

6. In the light of the advice so received, it is clear :—

(a) that, if M. Ranson's proposal were to be rejected, there is no genus to which the Recent Species *Gryphaea angulata* Lamarck,

1819, is objectively referable (i.e. there is no genus to which it is the type species) and that for those specialists who do not refer this species to the genus *Ostrea* Linnaeus, 1758, the oldest available nominal genus subjectively available for this species is *Crassostrea* Sacco, 1897 ;

- (b) that, if Dr. Cox's counter-proposal were to be rejected, the only generic name (apart from *Gryphaea* Lamarck, 1801) which has been applied to the Mesozoic Fossil Species *Gryphaea arcuata* Lamarck, 1801, is *Liogryphaea* Fischer, 1885, of which it is the type species, but that this generic name could not validly be used for this species without the intervention of the International Commission, for it is a junior subjective synonym of the two long-neglected names :—*Gryphaeigenus* Renier, 1807 ; *Gryphites* Schlotheim, 1813.

7. In order to comply with the General Directive referred to in paragraph 5 above and in accordance with the advice agreed upon with M. Ranson and Dr. Cox, I have included in the Alternative Rulings now submitted (1) a proposal that, in the event of the Commission rejecting M. Ranson's proposal, (and accepting Dr. Cox's counter-proposal) it should place the name *Crassostrea* Sacco, 1897, on the *Official List of Generic Names in Zoology* with a note (as prescribed by the International Congress of Zoology) that this name is placed on the *Official List* for use by those specialists who consider its type species generically separable from the type species of the genus *Ostrea* Linnaeus, 1758 ; (2) a proposal that in the event of the Commission rejecting Dr. Cox's proposal (and accepting M. Ranson's proposal) the names *Gryphaeigenus* Renier, 1807, and *Gryphites* Schlotheim, 1813, should be suppressed under the Plenary Powers for the purposes of the Law of Priority but not for those of the Law of Homonymy.

8. Owing to the complexity of the detailed action required and to the fact that there are two opposing applications to be considered, it has been considered that in the present case (as in similar cases in the past) the most convenient course from the point of view of the Members of the Commission will be to place before them drafts of Alternative Rulings rather than that they should be asked to vote for or against one only of the two applications submitted. Of the two alternative Rulings now submitted for consideration, ALTERNATIVE "A" is a Ruling that the *Règles* should be strictly applied in the present case (i.e. a Ruling against M. Ranson's proposal and in favour of that submitted by Dr. Cox), while ALTERNATIVE "B" is a Ruling that the Plenary Powers should be used to grant M. Ranson's proposal (and to reject that submitted by Dr. Cox).

ANNEXE TO NOTE BY THE SECRETARY

Particulars of comments received in the "Gryphaea" case

(a) *Authors supporting the use of the Plenary Powers to secure the valid use of the name "Gryphaea" for the Recent Species "Gryphaea angulata" Lamarck, 1819*

<i>Author</i>	<i>Bulletin Ref.</i>	<i>Author</i>	<i>Bulletin Ref.</i>
G. Ranson (<i>Paris</i>)	3 : 168 ; 6 : 205	B. Havinga (<i>Amsterdam</i>)	9 : 146
Jean Roger (<i>Paris</i>)	6 : 188	Sven Segerstråle (<i>Helsinki</i>)	9 : 146
G. Lecointre (<i>Rabat</i>)	6 : 187	H. A. Cole (<i>Conway</i>)	6 : 192 ; 9 : 146
P. Korringa (<i>Bergen op Zoom</i>)	6 : 189	M. Desbrosses (<i>Paris</i>)	9 : 146
A. Chavan (<i>Thoiry</i>)	6 : 191	E. Leloup (<i>Bruxelles</i>)	9 : 146
S. Jaeckel (<i>Berlin</i>)	6 : 188	A. M. Ramalho (<i>Lisbon</i>)	9 : 146
G. Mermod (<i>Geneva</i>)	6 : 191	C. E. Lucas (<i>Aberdeen</i>)	9 : 146

(b) *Authors supporting the strict application of the "Règles" for the purpose of maintaining the use of the name "Gryphaea" Lamarck, 1801, for the Mesozoic Fossil species "Gryphaea arcuata" Lamarck, 1801*

<i>Author</i>	<i>Bulletin Ref.</i>	<i>Author</i>	<i>Bulletin Ref.</i>
L. R. Cox (<i>London</i>)	2 : 324	J. P. S. Morrison (<i>Washington</i>)	6 : 188
D. T. Donovan (<i>Bristol</i>)	2 : 333	R. T. Abbott (<i>Washington</i>)	6 : 188
W. J. Arkell (<i>Cambridge</i>)	2 : 331	D. Nicol (<i>Washington</i>)	6 : 188
Myra Keen (<i>Stanford</i>)	2 : 332	Julia Gardner (<i>Washington</i>)	6 : 188
Siemon W. Muller (<i>Stanford</i>)	2 : 332	W. P. Woodring (<i>Washington</i>)	6 : 188
C. R. Boettger (<i>Frankfurt a.M.</i>)	J. B. Reeside, Jr. (<i>Washington</i>)	6 : 188
P. C. Sylvester-Bradley (<i>Sheffield</i>)	6 : 185	R. W. Imlay (<i>Washington</i>)	6 : 188
H. B. Stenzel (<i>Austin, Texas</i>)	6 : 186	L. W. Stephenson (<i>Washington</i>)	6 : 188
G. Gunter (<i>Port Aransas, Texas</i>)	6 : 186	W. A. Cobban (<i>Washington</i>)	6 : 188
H. A. Rehder (<i>Washington</i>)	6 : 188	H. E. Vokes (<i>Washington</i>)

III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

9. Issue of Voting Paper V.P.(54)11 : On 27th February 1954, a Voting Paper V.P.(54)11 was issued in which the Members of the Commission were invited to vote "either for Alternative

'A' (Fossil species as type species for *Gryphaea*) or for Alternative 'B' (use of the Plenary Powers to secure the Recent species (*G. angulata*) as the type species of *Gryphaea*) as set out in the drafts annexed hereto". The following are the drafts submitted with the foregoing Voting Paper as "Alternative 'A'" and "Alternative 'B'" respectively :—

ALTERNATIVE "A"

Draft Ruling on the basis that the "Règles" are to be strictly applied and that the name "Gryphaea" Lamarck, 1801, is therefore to have as its type species the Mesozoic Fossil species "Gryphaea arcuata" Lamarck, 1801

(1) (a) Under Article 25 of the *Règles*, the generic name *Gryphaea* Lamarck possesses availability for the purposes of the Law of Priority as from the date of its publication in 1801 in the *Système des Animaux sans Vertèbres*. (b) The selection by Children (1823) of *Gryphaea angulata* Lamarck as the type species of the foregoing nominal genus is invalid, since at the time of the publication of the name *Gryphaea* Lamarck, 1801, the name *Gryphaea angulata* Lamarck was a *nomen nudum* and was not published, with an indication, for the Recent species to which it is now applied until 1819. (c) The type species of *Gryphaea* Lamarck, 1801, is the Mesozoic Fossil species *Gryphaea arcuata* Lamarck, 1801, by selection by Anton (1839).

(2) The nominal species *Gryphaea angulata* Lamarck, 1819, is not the type species of any nominal genus, but the generic name *Crassostrea* Sacco, 1897, is available for use for that species by those specialists who regard it as congeneric with *Ostrea virginica* Gmelin, [1790] (the type species of *Crassostrea* Sacco) and who do not refer both species to the genus *Ostrea* Linnaeus, 1758.

(3) Under the Plenary Powers, the specific name *gryphus* Linnaeus, 1758, as published in the combination *Anomia gryphus*, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(4) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* :—

- (a) *Gryphaea* Lamarck, 1801 (gender : feminine) (type species, by selection by Anton (1839) : *Gryphaea arcuata* Lamarck, 1801) ;

(b) *Crassostrea* Sacco, 1897 (gender : feminine) (type species, by original designation : *Ostrea virginica* Gmelin, [1790] (a name incorrectly cited by Sacco as *virginiana*)) (for use by those specialists who consider *Ostrea virginica* Gmelin, [1790], generically distinct from *Ostrea edulis* Linnaeus, 1758) ;

(5) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* :—

(a) *arcuata* Lamarck, 1801, as published in the combination *Gryphaea arcuata*, the species so named to be interpreted by the lectotype selection made by Cox (1951 : 326) (specific name of type species of *Gryphaea* Lamarck, 1801) ;

(b) *obliquata* Sowerby (J.), 1815, as published in the combination *Gryphaea obliquata* ;

(c) *angulata* Lamarck, 1819, as published in the combination *Gryphaea angulata* ;

(d) *virginica* Gmelin, [1790], as published in the combination *Ostrea virginica* (specific name of type species of *Crassostrea* Sacco, 1897) ;

(6) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—

(a) *Liogryphaea* Fischer, 1885 (a junior objective synonym of *Gryphaea* Lamarck, 1801, the two nominal genera having the same species as type species) ;

(b) *Liogryphea* Douvillé, 1904 (an Erroneous Subsequent Spelling of *Liogryphaea* Fischer, 1885) ;

(7) The under-mentioned specific names are hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* :—

(a) *gryphus* Linnaeus, 1758, as published in the combination *Anomia gryphus*, as suppressed under the Plenary Powers under (3) above ;

(b) *virginiana* Sacco,¹ 1897, as published in the combination *Crassostrea virginiana* (an Erroneous Subsequent Spelling of *virginica* Gmelin, [1790], as published in the combination *Ostrea virginica*).

¹ Röding, 1798, was the first author to publish this misspelling. See paragraph 14 of the present *Opinion*.

ALTERNATIVE " B "

Draft Ruling on the basis that the Plenary Powers are to be used to designate, as the type species of the genus " *Gryphaea* " Lamarck, 1819, the Recent species " *Gryphaea angulata* " Lamarck, 1819, in place of the Mesozoic Fossil species " *Gryphaea arcuata* " Lamarck, 1801, being accepted as the type species of " *Gryphaea* " Lamarck, 1801

(1) Under the Plenary Powers the under-mentioned names are hereby suppressed for the purposes both of the Law of Priority and of the Law of Homonymy :—(a) *Gryphaea* Lamarck, 1801 ; (b) *Gryphaea*, all uses of, subsequent to Lamarck, 1801, and prior to Lamarck, 1819.

(2) Under the Plenary Powers the under-mentioned names are hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy : (a) the generic name *Gryphaeigenus* Renier, 1807 ; (b) the generic name *Gryphites* Schlotheim, 1813 ; (c) the specific name *gryphus* Linnaeus, 1758, as published in the combination *Anomia gryphus*.

(3) The under-mentioned names are hereby placed on the *Official List of Generic Names in Zoology* :—

- (a) *Gryphaea* Lamarck, 1819, as validated under the Plenary Powers under (1) above (gender : feminine) (type species, by selection by Children (1823) : *Gryphaea angulata* Lamarck, 1819) ;
- (b) *Liogryphaea* Fischer (P. H.), 1885, as validated under the Plenary Powers under (2) (a) and (b) above (gender : feminine) (type species, by monotypy : *Gryphaea arcuata* Lamarck, 1801) ;

(4) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* :—

- (a) *angulata* Lamarck, 1819, as published in the combination *Gryphaea angulata* (specific name of type species of *Gryphaea* Lamarck, 1819, as validated under the Plenary Powers under (1) above) ;
- (b) *arcuata* Lamarck, 1801, as published in the combination *Gryphaea arcuata* (specific name of type species of *Liogryphaea* Fischer, 1885, as validated under the Plenary Powers under (2) (a) and (b) above) ;

(c) *obliquata* Sowerby (J.), 1815, as published in the combination *Gryphaea obliquata* ;

(5) The under-mentioned generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—

(a) the names suppressed under the Plenary Powers for the purposes of both the Law of Priority and the Law of Homonymy in (1) above ;

(b) the names suppressed under (2) (a) and (b) above for the purposes of the Law of Priority but not for those of the Law of Homonymy ;

(c) *Liogryphaea* Douvillé, 1904 (an Erroneous Subsequent Spelling of *Liogryphaea* Fischer, 1885) ;

(6) The under-mentioned specific name is hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* :— the specific name *gryphus* Linnaeus, 1758, as published in the combination *Anomia gryphus*, as suppressed under the Plenary Powers under (2) (c) above.

10. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 27th May 1954.

11. Particulars of the Voting on Voting Paper V.P.(54)11 : At the close of the Prescribed Voting Period the state of the voting on Voting Paper V.P.(54)11 was as follows :—

(a) *Votes in favour of "Alternative 'A' "* had been given by the following eighteen (18) Commissioners (arranged in the order in which Votes were received) :

Sylvester-Bradley ; Holthuis ; Hering ; Vokes ; Boschma ; Riley ; do Amaral ; Esaki ; Lemche ; Dymond ; Hemming ; Cabrera ; Mertens ; Jaczewski ; Hankó ; Pearson ; Bradley (J.C.) ; Stoll ;

(b) "Alternative ' B ' " one (1) :

Bonnet ;

(c) *Voting Papers not returned* :

None.

12. Declaration of Result of Vote : On 28th May 1954, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(54)11, signed a Certificate that the Votes cast were as set out in paragraph 11 above and declaring that the proposal submitted in the foregoing Voting Paper as Alternative "A" had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

13. Addition of a " nomen nudum " to the " Official Index of Rejected and Invalid Specific Names in Zoology " : When preparing the Ruling for inclusion in the present *Opinion*, Mr. Hemming, Secretary to the Commission, noted that, although both the alternative proposals which had been submitted to the Commission in the present case provided for the addition of the name *angulata* Lamarck, 1819, as published in the combination *Gryphaea angulata* to the *Official List of Specific Names in Zoology* neither of those proposals provided, as required by the General Directive issued to the Commission by the International Congress of Zoology in relation to the placing of names on the *Official Indexes*, for the addition of the name *angulata* Lamarck, 1801, as published in the combination *Gryphaea angulata*, to the *Official Index of Rejected and Invalid Specific Names in Zoology* as an invalid *nomen nudum*. On detecting this inadvertent omission, Mr. Hemming, on 12th October 1954, executed a Minute directing that the foregoing *nomen nudum* be inserted in the foregoing *Official Index*.

14. Correction of the authorship attributed to the name " virginiana ", a misspelling for " virginica " Gmelin, [1790], " Ostrea " : in the course of the preparation of the Ruling to be given in the

present *Opinion*, further consultations took place between Mr. Hemming, as Secretary to the Commission, and Dr. L. R. Cox (*British Museum (Natural History), London*) on various bibliographical and similar questions, and from these it emerged that, contrary to the belief held when the present case was submitted to the Commission, Sacco in 1897 was not the first author to use the misspelling *virginiana* for the name *virginica* published by Gmelin in 1790 in the combination *Ostrea virginica*. Actually, this misspelling appeared in the literature as early as 1798 in the *Museum boltenianum* (Part 2, page 169). In the light of this information, the Secretary on 18th October 1954 issued a direction that both in the Ruling to be given in the present *Opinion* and in the list of bibliographical references to be given at the conclusion of this *Opinion* the misspelling *virginiana* be attributed to Röding and not to Sacco.

15. Preparation of the Ruling given in the present "Opinion" :

On 18th October 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(54)11, subject (i) to the minor adjustment specified in the Minute executed by the Secretary on 12th October 1954 (paragraph 13 above) and (ii) to the correction of the authorship attributed to one of the names concerned specified in the Secretary's Minute of 18th October 1954 (paragraph 14 above).

16. Original references : The following are the original references for the names placed on *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

angulata, *Gryphaea*, Lamarck, 1801, *Syst. Anim. sans Vertèbr.* : 398
angulata, *Gryphaea*, Lamarck, 1819, *Hist. nat. Anim. sans Vertèbr.*

6(1) : 198

arcuata, *Gryphaea*, Lamarck, 1801, *Syst. Anim. sans Vertèbr.* : 398
Crassostrea Sacco, 1897, in Bellardi & Sacco, *Moll. Terr. terz.*

Piemonte e Liguria 23 : 15

Gryphaea Lamarck, 1801, *Syst. Anim. sans Vertèbr.* : 398

gryphus, *Anomia*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 701
Liogryphaea Fischer (P.H.), 1886, *Manuel Conchyl.* : 927
Liogryphea Douvillé, 1904, *Miss. Sci. Perse Morgan* **3** (Etudes géol.) (4) (Pal.) : 273
oblíquata, *Gryphaea*, Sowerby (J.), 1815, *Min. Conch.* **2** : 24
virginiana, *Ostrea*, Röding, 1798, *Mus. bolten.* (2) : 169
virginica, *Ostrea*, Gmelin, [1790], in Linnaeus, *Syst. Nat.* (ed. 13) **1**(6) : 3336

17. The following is the reference for the type selection for the nominal genus *Gryphaea* Lamarck, 1801, specified in the Ruling given in the present *Opinion*:—Anton, 1839, *Verz. Conchyl. Samml. Anton* : 21.

18. The application dealt with in the present *Opinion* was published in the *Bulletin of Zoological Nomenclature* prior to the establishment of the *Official List of Family-Group Names in Zoology* by the Fourteenth International Congress of Zoology, Copenhagen, 1953. It has not been possible since then to deal with this aspect of the present case. This question is however now being examined on a separate File to which the Registered Number Z.N.(S.) 865 has been allotted.²

19. At the time of the submission of the original application dealt with in the present *Opinion*, the expression prescribed for the second portion of the binomen which constitutes the scientific name of a species was the expression “trivial name” and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word “trivial” appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression “specific name” was substituted for the expression “trivial name” and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

² A decision on this subject has now been taken by the International Commission and has been embodied in *Opinion* 358 (now in the press).

20. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

21. The present *Opinion* shall be known as Opinion Three Hundred and Thirty-Eight (338) of the International Commission on Zoological Nomenclature.

DONE in London, this Fourteenth day of October, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING

APPENDIX TO "OPINION" 338

COMMENTS RECEIVED FROM SPECIALISTS ON THE QUESTION OF THE ACTION WHICH IT IS DESIRABLE SHOULD BE TAKEN IN THE MATTER OF THE GENERIC NAME "GRYPHAEA" LAMARCK

PART 1. STATEMENTS RECEIVED FROM SPECIALISTS WHO FAVOURED THE ACCEPTANCE OF THE RECENT SPECIES "GRYPHAEA ANGULATA" LAMARCK, 1819, AS THE TYPE SPECIES OF THE GENUS "GRYPHAEA" LAMARCK

DOCUMENT 1/1

Observations sur la question de l'espèce type du genre "Gryphaea" Lamarck, 1801

Par GILBERT RANSON

(Sous-Directeur du Laboratoire de Malacologie, Muséum National d'Histoire Naturelle, Paris)

Plate 1

(published, 22nd May 1953, *Bull. zool. Nomencl.* 6 : 205—206, pl. 2)

Dans une Note récente³, parue dans ce *Bulletin* (Sept. 1951, Vol. 2 (Pt. 11) 324), notre Collègue et Ami L. R. Cox a enseveli dans un très long exposé, les faits essentiels qui font que logiquement et raisonnablement *Gryphaea angulata* Lamarck est l'espèce type du genre *Gryphaea* Lamarck.

³ For the paper by Dr. Cox here referred to see Document 1 in Part 2 of the present Appendix.

En réponse à cet article, je sou mets les faits suivants à la Commission internationale de Nomenclature zoologique.

1°—Pour la première fois, en 1823, Children (“ Lamarck’s Genera of Shells”, Art. V, *Quart. J. Sci. Lit. and Arts.*, 15) a désigné nommément le type du genre *Gryphaea* Lamarck, 1801. C’est *Gryphaea angulata* Lamarck, 1819.

Certes, cet auteur a choisi les types de Lamarck dans *l’Histoire Naturelle* de 1819 et non dans le *Système* de 1801. Cependant Children connaissait bien le *Système* de 1801. Cela prouve que dès cette époque, on avait bien la notion de « type », mais on ne concevait pas comme possible de choisir les types dans le *Système* de 1801, parce que ce dernier ne donne que des exemples, sans aucun élément sérieux de définition.

2°—Supposons les Zoologistes et Paléontologistes du Monde réunis devant les faits suivants :

- (a) *Système* de 1801 : *Gryphaea angulata* donné comme premier exemple,
- (b) *Histoire Naturelle* de 1819 : *Gryphaea angulata* donné comme premier exemple,
- (c) L’échantillon type qui est au Muséum de Paris, ayant servi à Lamarck pour définir son genre et son espèce (échantillon figuré ici, pl. 2, fig. 1).

Je suis persuadé qu’il n’y a pas un Collègue, qui honnêtement, pourrait nier que la définition de Lamarck, du genre et de l’espèce, ne se rapporte pas à cet échantillon “ actuel ”.

Personne ne pourrait nier que Lamarck, citant chaque fois cette espèce la première, n’a pas créé son genre pour celle-ci dont il venait de voir l’échantillon que nous possédons à Paris. (L’échantillon de la Collection Lamarck de Genève, figuré par Delessert en 1841 ne semble pas être un syntype d’après M. Mermod qui reconnaît que l’exemplaire de Paris est l’holotype. Je figure néanmoins cet exemplaire de Genève, pl. 2, fig. 2).

Monsieur Cox est le premier à avoir essayé de nier ce fait, contre toute évidence. Ce n’est pas bien. Si Monsieur Cox s’était donné la peine de voir le « type », il n’aurait pas essayé de montrer que la description de Lamarck ne correspond pas à l’espèce actuelle.

Monsieur Cox dit que l'expression de Lamarck « animal inconnu » laisse à penser qu'il n'y avait pas d'espèce européenne vivante. Tout au contraire, si Lamarck avait eu en vue un fossile, il n'aurait pas à préciser qu'on ne connaissait pas l'animal, ce qui est évident. Cette expression montre bien qu'il s'agit d'un animal actuel dont on n'a que la coquille.

3°—Il est plus loyal de dire qu'on ne doit pas retenir l'argument d'« intention de l'auteur » parce que celle-ci n'est pas toujours facile à établir et que c'est l'argument « formel », uniquement, qui doit fixer la solution à adopter.

En effet le seul argument apparemment valable pour dire que *G. angulata* n'est pas le type du genre *Gryphaea*, est que cette espèce, dans le *Système* de 1801, est un *nomen nudum* et que, par suite, il faut choisir une espèce citée après celle-ci.

Si Lamarck l'avait accompagnée de deux lignes seulement de description il n'y aurait pas de discussion et tout le monde serait d'accord pour dire que *G. angulata* est le type du genre *Gryphaea*. Mais il est bien évident que dans le *Système* de 1801, qui n'est qu'un *Genera*, où Lamarck ne donne que des exemples, *il ne pouvait donner pour G. angulata (nouvelle espèce basée sur un nouveau et récent matériel), ni références à des documents inexistantes, ni figures, ni description puisque ce n'était pas le lieu d'en donner.*

Il n'y a pas de doute possible que dans le *Système* de 1801, toutes les espèces nouvelles, basées sur du matériel nouveau, récent, seraient sans références ni descriptions, donc chacune serait un *nomen nudum*.

C'est là un argument fondamental pour démontrer que le *Système* de 1801 n'a pas les qualités requises pour y sélectionner les types. Des esprits subtils prétendent que Lamarck n'y indique pas les types pour les genres anciens (créés avant lui) mais que pour les genres nouveaux (créés par lui) les exemples qu'il donne ont les qualités requises pour y choisir les types. Un esprit clair et logique ne peut admettre que ce qui est vrai pour une partie du *Système* de 1801, soit faux pour l'autre partie !

4°—Anton, en 1839, a choisi *G. arcuata* comme espèce-type. Or M. Cox lui-même l'a bien montré, on ne sait absolument pas ce que Lamarck, en 1801, a voulu désigner sous ce vocable. En effet une référence a été changée par la suite et les deux autres ne sont pas très nettes. On ne connaît pas d'échantillon-type. Pourquoi persister dans cette erreur flagrante.



Figure 1.



Figure 2.

Explication :

Figure 1. *Gryphaea angulata* Lamarck, 1819. Holotype (Muséum National d'Histoire Naturelle, Paris).

Figure 2. *Gryphaea angulata* Lamarck, 1819. Exemplaire dans la collection de Lamarck à Genève (Muséum d'Histoire Naturelle). Exemplaire figuré par Delessert, 1841.

5°—Je voudrais montrer maintenant qu'à chaque instant on se heurte à des difficultés du même ordre lorsqu'on veut choisir les types dans le *Système* de 1801, alors que tout est clair et simple avec *l'Histoire naturelle* de 1819.

Il y a peu de temps, en discutant avec un Collègue du genre *Fissurella*, notre attention s'est portée, par hasard, sur le genre *Emarginula*. Dans le *Système* de 1801 nous voyons comme premier exemple, *Emarginula conica*, n. *Patella fissura* L. Tout de suite il vient à l'esprit que Lamarck a eu tort de ne pas nommer cette espèce, *Emarginula fissura* puisqu'il fondait son genre sur l'espèce linnéenne *Patella fissura* L. Il a bien compris son erreur par la suite puisque dans son *Histoire naturelle* de 1819 nous ne trouvons plus le nom de « *conica* » ; nous notons comme première espèce du genre *Emarginula* (t. VI, 2^{ème} part. p. 7) = *Emarginula fissura*.

Malgré cela, M. Winckworth (1935, *J. Conch.* 19 : 219) cite *E. conica* Lamarck, comme l'espèce-type. Ph. Dautzenberg et Ph. Fischer ont, au contraire, raison en choisissant (« Les Moll. marins du Finistère . . . », *Trav. stat. biol. Roscoff*, 1925 (3) : 95) comme type : *Emarginula fissura* (Linné).

À chaque pas on se heurte à des contradictions de cet ordre. Il faut vraiment pousser le formalisme jusqu'à ses limites déraisonnables et illogiques pour déclarer qu'on peut sélectionner des types dans le *Système* de 1801.

6°—Le groupe des Gryphées actuelles est extrêmement important, bien défini par sa prodissoconque ou coquille larvaire. Il est certainement aussi important que celui des Liogryphées du Jurassique. Il est regrettable que des auteurs le connaissent si mal.

Le terme de *Gryphaea* a été employé comme sous-genre d'*Ostrea* depuis Lamarck pour désigner un groupe d'Huitres actuelles. Dès 1823 Children avait désigné *G. angulata* comme type lamarckien.

La seule conclusion logique et raisonnable de cette discussion c'est que *Gryphaea angulata* Lamarck, 1819, est bien l'espèce type du genre *Gryphaea* Lamarck, 1801, et je sollicite de la Commission qu'elle veuille bien s'y rallier. A défaut d'une décision d'ordre général sur le *Système* de 1801, en ce qui concerne la sélection des types, je demande à la Commission de bien vouloir accepter le second point de vue du paragraphe 4 du récent exposé de la question par Mr. Hemming (1951, *Bull. zool. Nomencl.* 2 : 240).⁴

⁴ For the paper by Mr. Hemming here referred to see paragraph 5 of the present *Opinion*.

DOCUMENT 1/2

Note received on 31st July 1951 from JEAN ROGER (*Muséum National d'Histoire Naturelle, Paris*)

(published, 22nd May 1952, *Bull. zool. Nomencl.* 6 : 188)

Au sujet du genre *Gryphaea* Lamarck, 1819, je suis entièrement d'accord avec l'interprétation proposé par M. Ranson dans sa note au *Bull. Mus. nat. Hist. nat.* (1948), (2), 20, no. 6, p. 514—516.

DOCUMENT 1/3

Letter, dated 17th October 1951, from G. LECOINTRE (*Rabat, Maroc*)

(published, 22nd May 1952, *Bull. zool. Nomencl.* 6 : 187)

Je tiens à vous dire que je suis entièrement d'accord avec M. Gilbert Ranson du Muséum de Paris sur le point suivant :

Le genre *Gryphaea* Lamarck, 1819, a comme génotype : *Ostrea angulata*.

Je suis tout à fait d'accord également pour le *Système* de Lamarck de 1801 ne soit plus utilisé pour la sélection du genre.

DOCUMENT 1/4

Enclosure to a letter, dated 27th October 1951, from P. KORRINGA (*Rijksinstituut voor Visscheruonderzoek, Bergen op Zoom, The Netherlands*)

(published, 22nd May 1952, *Bull. zool. Nomencl.* 6 : 189—190)

In his 1948 note Ranson discusses the problem whether or not *Gryphaea angulata* Lamarck may be considered as the type species of

the genus *Gryphaea*. He points out that Lamarck's first description of the genus *Gryphaea*, dating from 1801, is but a preliminary one, and that therefore the genus *Gryphaea* should be considered to date from 1819, when Lamarck redescribed it in his *Histoire Naturelle des Animaux sans Vertèbres*. This view accepted, *Gryphaea angulata* Lamarck would be the type species of the genus, selected by Children in 1823. Therefore Ranson presented to the International Commission on Zoological Nomenclature at its session held in Paris in 1948 a communication in which he sought to prove that the type species of the genus *Gryphaea* Lamarck is *Gryphaea angulata* Lamarck.

As can be deduced from Hemming's report (1951) in the *Bulletin of Zoological Nomenclature*, a strict application of the international rules of zoological nomenclature leads, however, to the conclusion that the fossil species *Gryphaea arcuata* Lamarck is the type species of the genus *Gryphaea*. Moreover, Children's selection of *Gryphaea angulata* as type species is invalid since at the time when in 1801 the generic name *Gryphaea* was first validly published by Lamarck, the name *Gryphaea angulata*, then cited by Lamarck, was a mere *nomen nudum* and accordingly does not rank as an originally included species, and is ineligible for selection by a later author to be the type species of the genus in question.

Therefore Gunter (1950) is certainly right in stating that a strict application of the international rules of nomenclature leads to using the generic name *Gryphaea* for some Fossil species only (type species *G. arcuata*), and to the conclusion that the generic name *Crassostrea* (Sacco, 1897) is the first valid name for oysters of the type *angulata*, *virginica*, *gigas*, etc. Gunter rightly states that these oysters differ in too many respects from the flat oysters to lump them with the latter under the generic name *Ostrea*.

However right Gunter may be, I feel very reluctant to use the generic name *Crassostrea* and to suppress the genus *Gryphaea* for the Recent species. This certainly would enhance the confusion. For, up till now, very few have ever used the name *Crassostrea* for the Portuguese oyster and its nearest allies, while the term *Gryphaea* has been used very widely in this sense, even among practical oystermen. It is the feeling of others also that a too strict application of the "rules" often leads to absurdities. Fortunately there is a way to get around such difficulties: the Plenary Powers of the International Commission on Nomenclature could be used to suppress the name *Gryphaea* Lamarck, 1801, and all uses of that generic name from 1801 to the date of 1819, when it was republished by Lamarck in the *Histoire Naturelle des Animaux sans Vertèbres*. Then the name *Gryphaea* Lamarck 1819, thus validated, has as its type species the Recent species *Gryphaea angulata* Lamarck, 1819 (by selection by Children, 1823). This is stated in the note by Hemming of which the object was to attract the attention of interested specialists to the problem.

Awaiting the final decision of the International Commission on Nomenclature, I have to make a preliminary choice in writing a review. To minimise confusion I prefer to follow Ranson, and therefore use in that paper the very familiar name *Gryphaea* for all oysters of the type *angulata*, *virginica*, *gigas*, etc. In any case I agree completely with both Ranson and Gunter that these oysters should be placed in a separate genus.

In this difficult nomenclatural matter I have been kindly advised by Dr. C. O. van Regteren Altena of the Leyden Museum of Natural History. Maybe a greater number of interested specialists, until now not familiar with Hemming's report, will furnish the International Commission on Zoological Nomenclature upon its request with their view on this important and intricate problem, so that the final conclusion may eventually clear up the confusion.

References :

- Gunter (1950)—*American Midland Naturalist* 43 (2) : 438—449
 Hemming (1951)—*Bulletin of Zoological Nomenclature* 2 (6/8) : 239—240
 Ranson (1948)—*Bulletin du Muséum National d'Histoire Naturelle*, Paris (2) 20 : 514—516

DOCUMENT 1/5

Extract from a letter, dated 31st October 1951, from A. CHAVAN
 (Thoiry, Ain, France)

(published, 22nd May 1952, *Bull. zool. Nomencl.* 6 : 191)

Referring, now, to your notice in the "Journal of Paleontology" (25 (4), July 1951, p. 537) on *Gryphaea* Lamarck, 1801, I should willingly agree with its proposed suppression, validating *Gryphaea* of Lamarck, 1819. As pointed out by Dr. Ranson (1948, *Bull. Mus. Hist. nat. Paris* (2ème sér.) 20 (6) : 514—516), the list of species given by Lamarck in 1801 is evidently a provisional one, Lamarck himself indicating this in his book. As expressed by *Opinion* 79, Lamarck's *Système* of 1801 is not acceptable as designation of type species. I should accept Children's designation (1823) of *G. angulata* and I wish to point out that, if such

a suggestion is followed by the International Commission, *Gryphaea* will then become a much more useful name than if *G. arcuata* is selected, such a selection bringing drastic and perhaps useless changes in the generic allocation of a number of well-known species.

DOCUMENT 1/6

Letter, dated 29th October 1951, from S. JAECKEL
(*Zoologisches Museum der Humboldt-Universität, Berlin,
Germany*)

(published, 22nd May 1952, *Bull. zool. Nomencl.* 6 : 188)

In Uebereinstimmung mit Herr. G. Ranson und auf Grund seiner Arbeit "*Gryphaea*" *angulata* Lmk. est l'espèce "Type" du Genre *Gryphaea* Lmk. (*Bulletin du Museum Paris* 2. ser. t. XX 1948) halte ich *Gryphaea angulata* Lamarck für den Typus der Gattung *Gryphaea*.

DOCUMENT 1/7

Letter, dated 17th January 1952, from G. MERMOD (*Bureau de
Malacologie, Muséum d'Histoire Naturelle, Genève*)

(published, 22nd May 1952, *Bull. zool. Nomencl.* 6 : 191)

Au sujet du nom à adopter pour ce que Lamarck a appelé *Gryphaea angulata*, il me semble absolument certain que Lamarck en 1801 (*Système des Animaux sans Vertèbres*, page 398) a eu l'intention de créer le genre *Gryphaea* avec l'espèce *Gryphaea angulata* Lamarck comme l'espèce type.

Si, en 1801, l'espèce n'a pas été définie dans ses caractères spécifiques, c'est que le plan de l'ouvrage était de publier un *Genera* ou il ne pouvait pas y avoir de place pour des diagnoses spécifiques. Lamarck signale son intention de publier un tableau général avec les diagnoses de toutes les espèces à lui connues (p. 399 *Nota*, loc. cit., 1801).

En tout cas, en 1819 (*Histoire naturelle des Animaux sans Vertèbres*, vol. 6, p. 197) on remarque que la caractéristique du genre *Gryphaea* est

presque mot pour mot la même que celle de 1801 et c'est de nouveau la seule espèce vivante, *Gryphaea angulata*, qui est citée et caractérisée spécifiquement la première en liste.

Il me semble qu'il n'y a aucun avantage à remplacer *Gryphaea*, nom valable, utilisé depuis 1801 ou en tout cas 1819 par le nom *Crassostrea* Sacco, 1897.

Le Musée de Genève possède un exemplaire de *Gryphaea angulata*. Il n'est pas certain qu'il ait été en mains de Lamarck, car celui-ci cite un exemplaire de 100 mm. de long alors que le nôtre n'en mesure que 90. Mais en tout cas notre coquille est celle qui fût figurée par Delessert (1841, *Recueil de Coquilles de Lamarck*, pl. 20, fig. 3).

DOCUMENT 1/8

Letter, dated 2nd April 1952, addressed by B. HAVINGA (Chairman of the Shellfish Sub-Committee of the International Council for the Exploration of the Sea) and communicated by Dr. P. Korringa under cover of a letter dated 3rd April, 1952

(published, 30th December 1952, *Bull. zool. Nomencl.* 9 : 146)

I wish to support strongly Dr. Korringa in his request for the retention of the generic name *Gryphaea*. This name is generally known and used, and the suppression of this name in favour of *Crassostrea* would lead to confusion and great difficulties.

DOCUMENT 1/9

Letter, dated 16th January 1952, from SVEN SEGERSTRÅLE (*Museum Zoologicum Universitatis, Helsinki, Finland*) and communicated by Dr. P. Korringa under cover of a letter dated 3rd April 1952

(published, 30th December 1952, *Bull. zool. Nomencl.* 9 : 146)

Thank you very much for your letter of 11th January about the nomenclature problem concerning the generic name of *Gryphaea*.

Like you I agree with Dr. Korringa's view that we should try to conserve the name *Gryphaea* for the Portuguese oyster and its closest allies. I have only too often regretted the perpetual changes in zoological nomenclature and am glad to contribute to conserving the *status quo* in this case.

DOCUMENT 1/10

Letter, dated 6th February 1952, from H. A. COLE (*Ministry of Agriculture and Fisheries, Fisheries Experiment Station, Conway, Wales*)

(published, 22nd May 1952, *Bull. zool. Nomencl.* 6 : 192)

I understand that the question of the retention of the generic name *Gryphaea* for the Portuguese oyster and its nearest relatives is now under consideration. I should like to add my name to those asking for its retention.

I am not concerned with the systematic arguments, which no doubt will be presented in full by Dr. Gilbert Ranson and others, but with practical considerations. As you know, it is only comparatively recently that the propriety of dividing the oviparous oysters from the larviparous oysters has been generally accepted, following the work of T. C. Nelson and others. To the well-marked differences in anatomy and mode of reproduction, we (Cole and Knight-Jones, 1949, *Fish. Invest.* (2) 17 (No. 3) have added differences in the behaviour of the larvae at setting.

Throughout the period when oysters were, for the most part, grouped loosely together in the genus *Ostrea*, the identity of the Portuguese oyster was maintained by Continental workers under the name *Gryphaea angulata*. To adopt *Crassostrea* now would be to create fresh confusion. Already we have Australian and New Zealand workers referring their common commercial species to the genus *Saxostrea*, although they are clearly very closely related indeed to the Portuguese species. This confusion is, I believe, typical of what would follow if the name *Crassostrea* was adopted.

The division of oviparous from larviparous oysters has assisted materially in dispersing the confusion reigning regarding their physiological and environmental requirements. In consequence it has been appreciated that cultivation methods applicable to oysters of the genus *Gryphaea* may not be equally applicable to larviparous species. As a

result many ill-designed attempts to apply American methods to the cultivation of flat oysters (genus *Ostrea*) in Europe, Japan, Australia and New Zealand, or North European methods to the cultivation of tropical oysters (genus *Gryphaea*) have been reconsidered.

In contrast, the methods developed by the French for the cultivation of *Gryphaea angulata* are being applied with very striking results in West and East Africa and in the Indian Ocean. To maintain the identity of the Portuguese oyster, and to establish the close relationship of the tropical oviparous oysters to it by grouping them under the same genus, cannot but assist in the development of oyster culture in these areas.

As I mentioned earlier, I am concerned with practical considerations as I feel that systematics should be the servant of applied biology. To conserve the name *Gryphaea* would undoubtedly be of great value to oyster biologists. I write as a worker for twenty years in this field.

DOCUMENT 1/11

Letter, dated 16th January 1952, from H. A. COLE (*Ministry of Agriculture and Fisheries, Fisheries Experiment Station, Conway, Wales*) and communicated by Dr. P. Korringa under cover of a letter dated 3rd April 1952

(published, 30th December 1952, *Bull. zool. Nomencl.* 9 : 146)

Thank you for your letter of 11th January regarding the retention of the generic name *Gryphaea* for the Portuguese oyster and its nearest allies. I am, of course, aware of the controversy over its name and I have had some correspondence on the subject with American workers.

I am pleased to support Dr. Korringa in his request for the retention of this well-established name. I believe that to suppress it in favour of *Crassostrea* would lead to additional confusion.

DOCUMENT 1/12

Letter, dated 17th January 1952, from M. DESBROSSES (*Office Scientifique et Technique des Pêches Maritimes, 59 Avenue Raymond Poincaré, Paris*) and communicated by Dr. P. Korringa under cover of a letter dated 3rd April 1952

(published, 30th December 1952, *Bull. zool. Nomencl.* 9 : 146)

Je suis d'accord pour que le Sous-Comité du "Shellfish" recommande de conserver le nom de *Gryphaea* pour l'Huître Portugaise et les espèces voisines, à la Commission Internationale de Nomenclature Zoologique.

DOCUMENT 1/13

Letter, dated 18th January 1952, from E. LELOUP (*Institut Royal des Sciences Naturelles de Belgique, Bruxelles, 4 le Rue Vautier, 31*) and communicated by Dr. P. Korringa under cover of a letter dated 3rd April 1952

(published, 30th December 1952, *Bull. zool. Nomencl.* 9 : 146)

J'ai l'honneur de vous accuser réception de votre lettre du 11 janvier 1952 et de ses annexes.

Comme je l'ai dit à la séance du Shellfish Subcommittee à Amsterdam, je ne suis pas partisan d'appliquer à la lettre les règles de nomenclature zoologique pour le cas *Gryphaea*. Je propose de maintenir le nom *Gryphaea*, consacré par l'usage.

A ce propos, j'ai consulté mes collègues malacologistes de l'Institut Royal des Sciences naturelles, MM. M. Glibert, Conservateur et W. Adam, conservateur adjoint. Ils sont du même avis.

DOCUMENT 1/14

Letter, dated 22nd January 1952, from A. M. RAMALHO (*Instituto de Biologia Maritima, Caise do Sodr , Lisboa*) and communicated by Dr. P. Korringa under cover of a letter dated 3rd April 1952

(published, 30th December 1952, *Bull. zool. Nomencl.* 9 : 146)

In reply to your letter of the 11th January, I beg to inform you that I quite agree that the Shellfish Sub-committee should recommend the International Commission on Zoological Nomenclature to conserve the name *Gryphaea* for the Portuguese Oyster and its allied species. This means, if I understand correctly, that the Sub-committee will be in favour of the issue described as under (2) of S4 of the note by M. F. Hemming you so kindly sent with your letter.

DOCUMENT 1/15

Letter, dated 4th February 1952, from C. E. LUCAS (*Scottish Home Department, Marine Laboratory, Wood Street, Torry, Aberdeen*) and communicated by Dr. P. Korringa under cover of a letter dated 3rd April 1952

(published, 30th December 1952, *Bull. zool. Nomencl.* 9 : 146)

Turning now to the problem about the naming of the Portuguese oyster, in principle it seems that the name ought to be *Crassostrea*, but in practice there seems to be no doubt that we should favour the retention of the name *Gryphaea*. I hope, therefore, that the International Commission on Zoological Nomenclature will be able to conserve the name *Gryphaea*.

PART 2. STATEMENTS RECEIVED FROM SPECIALISTS WHO FAVOURED THE ACCEPTANCE OF THE MESOZOIC FOSSIL SPECIES "GRYPHAEA ARCUATA" LAMARCK, 1801, AS THE TYPE SPECIES OF THE GENUS "GRYPHAEA" LAMARCK, 1801

DOCUMENT 2/1

On the question of the type species of "Gryphaea" Lamarck, 1801 (Class Pelecypoda) : Comment on proposal submitted by M. Gilbert Ranson, together with a supplementary request for the use of the Plenary Powers to suppress the trivial name "gryphus" Linnaeus, 1758, as published in the binominal combination "Anomia gryphus"

By L. R. COX, Sc.D., F.R.S.,

British Museum (Natural History), London

(published, 28th September 1951, *Bull. zool. Nomencl.* 2 : 324—331)

1. The present paper is submitted to the International Commission on Zoological Nomenclature in response to the recently published request by the Secretary to the Commission (Hemming, 1951, *Bull. zool. Nomencl.* 2 : 239—240) for the views of interested specialists on the proposal relating to the determination of the type species of the genus *Gryphaea* Lamarck submitted to the Commission by M. Gilbert Ranson (1950, *Bull. zool. Nomencl.* 3 : 168—170).

2. In that application (as in other previously published papers) M. Ranson concluded that the type species of the genus *Gryphaea* Lamarck is the living Portuguese Oyster, *Gryphaea angulata* Lamarck, 1819 (*Hist. nat. Anim. sans Vertèbr.* 6 (1) : 198). Arguments leading to a different conclusion, namely that the type species of this genus is *Gryphaea arcuata* Lamarck, 1801 (*Syst. Anim. sans Vertèbr.* : 398), have, however, been advanced by various workers. These arguments are examined in the following paragraphs.

3. In 1898 (*Tertiary Fauna Florida* : 672) Dall (W. H.) showed : (a) that the name *Gryphaea* was first published by Lamarck in his *Système des Animaux sans Vertèbres* ; (b) that, although the name *Gryphaea angulata* was the first name there listed under *Gryphaea*, it was a *nomen nudum* and therefore that the species in question was not available for selection as type species ; (c) that several of the names there cited under *Gryphaea* were founded with indications adequate to establish the identity of the species concerned, which therefore were available for subsequent selection as type species. The most important of those species is *Gryphaea arcuata*. Dall's opinion that it was virtually selected as type species by Bosc in 1802 cannot, however, be accepted. Hertlein (1933, *Trans. San Diego Soc. nat. Hist.* 7 : 278) referred to an alleged type selection of *G. arcuata* by Chenu in 1858. The earliest valid selection now known is however by Anton in 1839, who also selected *G. arcuata*. This fact seems first to have been recorded in print by H. B. Stenzel (1947, *J. Paleont.* 21 : 174). It is most improbable that an earlier selection of one of the species available from the *Système* will now be found.

4. Monsieur Ranson attempts to counter these arguments by maintaining that the *Système* is a work which should be disregarded in discussions on nomenclature. His reasons (if I understand him correctly) are : (a) that the International Commission rendered an *Opinion* (*Opinion* 78) the meaning of which was that citations of single species in this work under previously established genera cannot be accepted as type selections ; (b) that it was a provisional and premature work, as shown by the fact that Lamarck many years later (1819, *Hist. nat. Anim. sans Vertèbr.* 6(1) : 198—200) changed the names of some species included in it and certain references given under other species. He therefore considers that the first publication of *Gryphaea* which can be accepted was by Lamarck (1819, *op. cit.*) and that a selection of *G. angulata* was validly established as from that work as the type species by Children (1823).

5. Even though it means repeating much that has been said by previous writers, I will deal in turn with these and other points made by Monsieur Ranson.

(a) Status of Lamarck's "Système"

6. This work unquestionably fulfils the necessary conditions to constitute a valid publication under the International Rules. The fact that it does not contain type selections is quite irrelevant to this question. Equally fallacious is the argument that the *Système* should be rejected because it was a premature work. Most systematists change their minds on some questions of synonymy and classification during the course of eighteen years, but their earlier works do not thereby lose

their status as publications. If, nevertheless, it were to be held that the *Système* should be suppressed by the International Commission in order that *G. angulata* should become available for selection as type species of *Gryphaea*, it must be remembered that lengthy researches would have to be made on possible repercussions on the nomenclature of other genera included in that work. Nor should it be forgotten that between 1801 and 1819 the generic name *Gryphaea* was published by at least four other workers (Bosc, 1802 ; Roissy, 1805 ; J. Sowerby, 1815 ; Cuvier, 1817), from any of whose works *G. arcuata* (or its synonym *G. incurva* J. Sowerby) would be available for selection as type species of the genus to the exclusion of the then still undescribed *G. angulata*.

(b) Is the generic name "Gryphaea" validly established in the "Système" ?

7. The answer to this question is that the name *Gryphaea* unquestionably was so established. A generic diagnosis was given and certain clearly recognizable nominal species were included in the genus.

(c) Which of the species included under "Gryphaea" by Lamarck in the "Système" are clearly recognizable and hence available for subsequent selection as type species ?

8. The specific names included under *Gryphaea* in this work are listed below. Three are *nomina nuda* ; the identity of the remainder rests on figures in older works. Since no diagnoses are given, no specimens preserved in the Lamarckian Collection or in any collections known to have been studied by Lamarck can be accepted as the type specimens of these species.

- (i) *Gryphaea angulata*. No references to figures are given. The name is a *nomen nudum*.
- (ii) *Gryphaea suborbiculata*. The references are to "Knorr. Petrif. vol. 2^e, part. 1, pl. 62. Encyclop. pl. 189, f. 3, 4". Lamarck's references to Knorr are not bibliographically correct, as he renumbered Knorr's plates owing to the peculiarity of Knorr's original system of numbering. The plate referred to is that numbered "DIIIc", and can be identified by counting the plates from the beginning. *G. suborbiculata*, identified both by the figure in this plate and those of the *Encyclopédie méthodique* cited by Lamarck, is a well-known Upper Cretaceous species. Lamarck later re-named it *Gryphaea columba* and it is now referred to the genus *Exogyra* Say, 1820.

- (iii) *Gryphaea cymbula*. The reference given is "Knorr. Petrif. vol. 2^e, part. 1, pl. 20, f. 7." The plate number should read "B. I. d", in which fig. 7 shows the profile view of a large Jurassic *Gryphaea*. This appears to be a well-known Middle Liassic species, although Rollier (1915, *Fossiles nouveaux ou peu connus* : 571) considers that it cannot be identified with certainty.
- (iv) *Gryphaea arcuata*. The references are "Encyclop. pl. 189, f. 1, 2. Knorr. Petrif. vol. 2^e, p. 1, pl. 60, f. 1, 2. Bourg. Petrif. no. 92." This species needs careful consideration, and it seems desirable to fix its identity by selecting as lectotype the original of the most appropriate of the figures cited. The *Encyclopédie méthodique* figures were later omitted by Lamarck (1819, *Hist. nat. Anim. sans Vertèbr.* 6 (1) : 198) from those cited under *G. arcuata* and included under *G. cymbium*. The reference to Knorr has the objection that the plate cited should read "D. III a" (not 60). Knorr gave no localities for the specimens represented in figs. 1, 2 of this plate, but there is little doubt that fig. 1, at least, is of a specimen from the Lower Lias closely resembling that described by J. Sowerby in 1815 as *Gryphaea incurva*. Fig. 92 (on pl. xv) of Bourguet's *Traité de Pétrifications* (the third work cited by Lamarck) is of a very similar shell which undoubtedly came from the Lower Lias, although again no locality is given. Bourguet's figured specimen is hereby selected as the lectotype of *G. arcuata*.

So great, however, are the difficulties of specific identification in Liassic *Gryphaeas*, that it might be contended that a single figure, however good, of a specimen of unknown provenance is insufficient for subsequent recognition of a species. Some workers would, in fact, maintain that a species of this group could be identified only if its precise locality and geological horizon were known, or, alternatively, a large series of specimens from the same bed available for statistical examination. Schäfle (1929, *Geol. paläont. Abh.* (n.s.) 17(2) : 26. pl. 2 figs. 7—17 ; pl. 3, figs. 1—4, 9), the latest reviser of Liassic oysters as a whole, however, regards *G. arcuata* as a species of moderately long geological range and broad synonymy, and Bourguet's figured specimen was undoubtedly a fully representative specimen of the species as conceived of by this author. Schäfle's pl. 2, fig. 7, compares closely with Bourguet's figure, as does his pl. 2, fig. 16 with Knorr's pl. D.III a, fig. 1. Bourguet's figure of the specimen which is now selected as lectotype, together with Knorr's fig. 1, are, therefore, sufficient to establish the identity of *G. arcuata* as interpreted by Schäfle, whose work, although not statistical, is as thorough as that of any other modern author.

- (v) *Gryphaea africana*. Lamarck's reference is "Encyclop. pl. 189, f. 5, 6". These figures represent a well-characterized species which is abundant in the Cenomanian of Northern Africa and the Middle East and is now referred to *Exogyra* Say.
- (vi) *Gryphaea carinata*. The reference given by Lamarck is "Bourg. Petrif. pl. 15, f. 89, 90." There is some doubt as to which of several Cretaceous species of *Exogyra* is represented by these figures. The name *G. carinata* has not been generally adopted.
- (vii) *Gryphaea latissima*. Lamarck's reference is "Bourg. Petrif. pl. 14, no. 84, 85." This is the well-known Lower Cretaceous *Exogyra* to which the later names *couloni* (Defrance) and *sinuata* (J. Sowerby) have more frequently been applied.
- (viii) *Gryphaea depressa*. *A nomen nudum*.
- (ix) *Gryphaea angustata*. *A nomen nudum*.

9. From the above, it may be seen that, besides *G. arcuata*, three species of unquestionable identity (*G. suborbiculata*, *G. africana*, *G. latissima*), all now included in *Exogyra*, were available for selection as the type species of *Gryphaea* Lamarck, 1801, together with two of doubtful identity (*G. cymbula*, *G. carinata*).

(d) Is Anton's selection of "G. arcuata" as type species of "Gryphaea" Lamarck without technical objections?

10. On pl. vi. of the preface to his *Verzeichniss* (1839) Anton refers to "Gattungen (deren Typusart mit Versalbuchstaben gedruckt ist)" and on p. 21 *arcuata* is the only species printed in small capitals under "Untergattung *Gryphaea* Lam." Throughout the work the type species of genera and subgenera are consistently indicated in this manner, and there seems to be no technical objection to this method of type selection. It is reasonable to maintain that a type selection for *Gryphaea* Lamarck without mention of the date of publication of the genus must be accepted as referring to its earliest place of publication.

11. So far as I know, none of the other species available from the *Système* has ever been cited as the type species of *Gryphaea*.

- (e) Is there evidence that it was Lamarck's intention to found the genus "Gryphaea" primarily upon the living species "G. angulata"?

12. Monsieur Ranson argues that such was Lamarck's intention, as *G. angulata* was the first species listed by him under *Gryphaea* both in 1801 and in 1819. The generic diagnosis, however, states "crochet . . . courbé en spirale involute", whereas the umbonal region in *G. angulata* is not involute, but coiled in a posterior direction, as in *Exogyra*. It further states "animal inconnu", again suggesting that it was not the living European species that Lamarck had primarily in mind when writing the diagnosis. The actual generic name, moreover, was derived from the word "gryphites", which had long been applied to the fossil forms in non-binominal literature.

- (f) Does it seem desirable, to preserve current usage, for the International Commission to designate "G. angulata" Lamarck, 1819 as type species of "Gryphaea" under its Plenary Powers?

13. The generic name *Gryphaea* has been employed for the group of incoiled fossil oysters from Jurassic deposits in countless text-books and general works for the past 125 years. Since 1885, when P. Fischer (*Manuel de Conchyliologie*: 927) cited *G. angulata* as an example of *Gryphaea* and proposed the new name *Liogryphaea* for *G. arcuata* (although he referred this species to *Gryphaea* in the explanation of his text-figure), the name *Liogryphaea* has become fairly current in French palaeontological literature, although it has gained little ground in other countries. In my card index of Jurassic lamellibranchia extracted from the palaeontological literature of the whole world I have 1002 references under *Gryphaea* and 51 under *Liogryphaea*, whether as distinct genera or as subgenera of *Ostrea*. This shows that the name *Gryphaea* is about 20 times more familiar to palaeontologists as a whole than *Liogryphaea*. In fact, if *G. angulata* were the valid type species of *Gryphaea*, there would be a strong case for the use of the Plenary Powers with a view to legalizing the use of this generic name for the fossil forms. Similar figures for the name of the Portuguese Oyster are not available. Except in France, however, this is usually known as *Ostrea angulata* Lamarck, the necessity for its generic separation from *Ostrea* not being generally admitted. It was catalogued as *Ostrea* (*Crassostrea*) *angulata* by Mr. R. Winckworth in his "List of the Marine Mollusca of the British Isles" (1932, *J. Conchol.* 19 : 240).

Conclusions

14. In the light of the foregoing considerations, it is evident (1) that, under the *Règles*, Lamarck's *Système* is an available work for the

purposes of Article 25 (the Law of Priority) (the observations in regard to that work contained in the Commission's *Opinion* 78 relating to an entirely different question, namely whether the method of citing specific names there adopted constitutes the selection, under Article 30, of the species so cited as the type species of the genera in which those species are severally placed), (2) that the specific name *Gryphaea angulata*, as cited in the *Système*, is a *nomen nudum* and in consequence that the species validly so named by Lamarck eighteen years later (in 1819) is ineligible for selection as the type species of *Gryphaea* Lamarck, 1801, (3) that of the described species included in *Gryphaea* in 1801 the first to be selected by any worker (Anton, 1839) as the type species of that genus was the fossil species *Gryphaea arcuata* Lamarck, 1801, (4) that in palaeontological literature the name *Gryphaea* is firmly established as the name of the genus containing the Liassic species *Gryphaea arcuata*, that genus having been called by that name about twenty times as often as by the name *Liogryphaea* Fischer, 1885, (*Man. Conch.* : 927), the name which that genus would bear, if *G. angulata* Lamarck, 1819, and not *G. arcuata* Lamarck, 1801, were the type species of *Gryphaea*, while it is only by French workers that the name *Gryphaea* has been habitually used for *G. angulata*, workers in other countries generally retaining that species in the genus *Ostrea* Linnaeus, 1758.

15. While I differ from Monsieur Ranson on the question of the species which, under the *Règles*, is the type species of the genus *Gryphaea* I welcome his action in bringing this matter before the International Commission on Zoological Nomenclature, for it is clearly desirable that a final decision on this matter should be obtained as soon as possible and an end thus put to the fruitless discussions which have been in progress for over sixty years. Before I formulate the action which I recommend that the International Commission should now take, in order finally to determine the type species of the genus *Gryphaea*, I must refer briefly to another question, which, though entirely unconnected with the question of the type species of this genus, has nevertheless a bearing on the action which it is desirable that the Commission should now take. I refer to the question whether the trivial name *arcuata* Lamarck, 1801, as published in the binominal combination *Gryphaea arcuata*, is the oldest available name for the species which is the type species of the genus *Gryphaea*. The name *Gryphaea arcuata* Lamarck, 1801, is an available name both in the sense that it is not a junior homonym of any previously published specific name and in the sense that it is not a junior objective synonym of an earlier name applied to the same species. There is, however, an earlier name, which has hitherto been treated by almost all authors as a *nomen dubium*, which may have been based upon specimens of the same species as that upon which the nominal species *Gryphaea arcuata* Lamarck, 1801 (as defined by the lectotype selection made in paragraph 8(iv) above) was based. This nominal species is *Anomia gryphus* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) 1 : 701), which was based upon a short diagnosis (which cannot be interpreted with certainty) and upon references to five older

works, none of which, it may be noted, was among those similarly cited by Lamarck when publishing the name *Gryphaea arcuata*, though some illustrate that species, as here interpreted. Hanley (1855, *Ipsa Linn. Conch.* : 124), it is true, recorded that the Linnean Collection includes a worn *Gryphaea* bearing the number 192 (under which Linnaeus listed *Anomia gryphus* in 1758) and that this appears to belong, not to *G. arcuata*, but to the related species *G. obliquata* Sowerby (J.), 1815 (*Min. Conch.* 2 : 24). Nevertheless, this specimen could not be accepted as more than a syntype of the Linnean species. Thus, the trivial name *gryphus* Linnaeus, 1758, as published in the binominal combination *Anomia gryphus*, constitutes a potential threat to the stability of the name of one or other of the two species now known as *Gryphaea arcuata* Lamarck and *Gryphaea obliquata* Sowerby (J.). The possibility that a well-established name (such as the trivial name *arcuata* Lamarck, 1801, or the trivial name *obliquata* Sowerby (J.), 1815) might be threatened by some older *nomen dubium* (such as the trivial name *gryphus* Linnaeus, 1758) has been anticipated by the International Commission and by the International Congress of Zoology, and the latter body, on the recommendation of the Commission, has inserted in Article 31 a provision that in such a case the question at issue is to be referred to the Commission for decision (see 1950, *Bull. zool. Nomencl.* 4 : 76). It is in pursuance of that provision that this case is now reported to the International Commission. It cannot possibly be established that the trivial name *gryphus* Linnaeus, 1758, certainly applies to the same species as the name *arcuata* Lamarck, 1801, and the continued existence of this name as an available name serves no useful purpose whatever, constituting only a threat to the stability of the names *arcuata* Lamarck and *obliquata* Sowerby (J.). The International Commission is accordingly asked to remove that threat by using its Plenary Powers to suppress the trivial name *gryphus* Linnaeus.

Recommendations

16. I accordingly ask the International Commission on Zoological Nomenclature to reject the arguments regarding the type species of the genus *Gryphaea* advanced by Monsieur Ranson, and :—

- (1) to rule that, under Article 25 of the *Règles*, the generic name *Gryphaea* possesses availability for the purposes of the Law of Priority as from the date of its publication in 1801 in the *Système* of Lamarck and that the type species of that genus is *Gryphaea arcuata* Lamarck, 1801, that species having been so selected by Anton (1839) and having been the first of the originally included species to have been so selected by any author ;
- (2) to use its Plenary Powers to suppress the trivial name *gryphus* Linnaeus, 1758, as published in the binominal combination *Anomia gryphus*, for the purposes of the Law of Priority but not for those of the Law of Homonymy ;

- (3) to place the generic name *Gryphaea* Lamarck, 1801 (gender of generic name : feminine) (type species, by selection by Anton (1839) : *Gryphaea arcuata* Lamarck, 1801) on the *Official List of Generic Names in Zoology* ;
- (4) to place the under-mentioned trivial names on the *Official List of Specific Trivial Names in Zoology* :—
- (a) *arcuata* Lamarck, 1801, as published in the binominal combination *Gryphaea arcuata*, the species so named to be defined by the lectotype selection made in the present application (trivial name of type species of *Gryphaea* Lamarck, 1801) ;
 - (b) *obliquata* Sowerby (J.), 1815, as published in the binominal combination *Gryphaea obliquata* ;
 - (c) *angulata* Lamarck, 1819, as published in the binominal combination *Gryphaea angulata* ;
- (5) to place the under-mentioned generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology* :—
- (a) *Liogryphaea* Fischer, 1885 (a junior objective synonym of *Gryphaea* Lamarck, 1801, the two nominal genera having the same species as type species) ;
 - (b) *Liogryphea* Douvillé, 1904 (*Miss. sci. Pers.* 3 (Études géol.) (4) (Pal.) : 273) (an invalid variation of *Liogryphaea* Fischer, 1885) ;
- (6) to place the trivial name *gryphus* Linnaeus, 1758, as published in the binominal combination *Anomia gryphus*, as proposed, under (2) above, to be suppressed under the Plenary Powers, on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology*.

DOCUMENT 2/2

Extract from a letter dated 8th June, 1951, from D. T. DONOVAN, B.Sc., PH.D. (*University of Bristol, Department of Geology, Bristol*)

(published, 28th September 1951, *Bull. zool. Nomencl.* 2 : 333)

Gryphaea arcuata Lamarck, 1801, the type species of *Gryphaea* Lamarck, 1801, and other species of the same genus, are common and

familiar fossils in rocks of Lower Lias age, and have been known almost exclusively by this generic name since the time of Lamarck's work. I realise that the living species, *Gryphaea angulata* Lamarck, 1819, the Portuguese Oyster, is very well known to students of recent molluscs, but, even if it is as familiar to them as the fossil species *Gryphaea arcuata* Lamarck is to palaeontologists, the use of the Plenary Powers to suspend the *Règles* where they operate to give a perfectly unambiguous result would seem highly undesirable, and only to be recommended if the combination *Gryphaea arcuata* had for long fallen out of use, which is most emphatically not the case.

DOCUMENT 2/3

Extract from a letter dated 3rd June 1951, from W. J. ARKELL, M.A., D.Sc., F.R.S. (*Cambridge University, Sedgwick Museum, Cambridge*)

(published, 28th September 1951, *Bull. zool. Nomencl.* 2 : 331)

I disapprove of this application and consider that the Rules should take their course. By so doing, they legalise the current and past practice in what I believe to be the overwhelming majority of literature in which the name *Gryphaea* has been mentioned. I can recall no exception in the whole of palaeontological literature to the assumption that the type species of *Gryphaea* is a Liassic species. Moreover, the work on programme evolution that has made *Gryphaea* a household word has so widely disseminated the name in biological literature generally that I cannot understand even a neontologist wanting to change the type species.

DOCUMENT 2/4

Letter, dated 29th May 1951, from MYRA KEEN (*Curator of Paleontology*) and SIEMON W. MULLER (*Professor of Geology, Stanford University, Stanford, California, U.S.A.*)

(published, 28th September 1951, *Bull. zool. Nomencl.* 2 : 332)

We strongly disapprove the proposal that *Gryphaea* Lamarck, 1801, should be suppressed under the Plenary Powers of the International

Commission. We see no compelling reason why this should be done, and, in our opinion, such action would result in much confusion.

Surveying the literature, we observe that even those authors of the past who have accepted *Gryphaea angulata* Lamarck, 1819, as the type species of the genus *Gryphaea* have included *G. arcuata* Lamarck, 1801, in their concept of the genus; and hence, the name is much more widely established in paleontological literature than it is in the literature on Recent forms. The term *Crassostrea* Sacco, 1898 (in Bellardi & Sacco, *Moll. Terr. terz. Piemonte e Liguria* 23 : 15) is available for use in the Recent group—in fact is used by many modern authors. Therefore, we feel that nothing is to be gained and much is to be lost in adopting the proposal, for it means shifting the concept of the genus. If by the proposed ruling, a name were to be protected, the case would be different. This change would merely render obsolete a large body of literature in order to provide a given name for a given type species. Much simpler would be the erection of a new generic group if Monsieur Ranson feels that *Crassostrea* is inappropriate for the restricted group represented by *Gryphaea angulata*.

The problem has been discussed by the paleontologists Dall (1898, *Trans. Wagner Free Inst. Sci. Philad.* 3 (4) : 672—675), Hertlein (1933, *Trans. San Diego Soc. nat. Hist.* 7 (22) : 277—278) and Stenzel (1947, “Nomenclatural Synopsis of supraspecific groups of the family Ostreidae”, *J. Paleont.* 21 (2) : 165—185, especially page 175), all of whom have come to the conclusion that the type species of *Gryphaea* should be *G. arcuata* Lamarck, 1801. The reasons which they and also Mr. R. Winckworth have advanced seem to us cogent.

DOCUMENT 2/5

Comment by C. R. BOETTGER (*Natur-Museum und Forschungs-Institut Senckenberg, Frankfurt a. Main, Germany*) and communicated by Robert Mertens, of the same institution, in a letter dated 27th August 1951

Ich bin dafür, dass *Gryphaea* Lamarck, 1801, ihre nomenklatorische Gültigkeit behält, und dass *Gryphaea arcuata* Lamarck, 1801, nach der Festsetzung durch Anton vom Jahre 1839 als ihr Typus anzusehen ist. Das entspricht wohl auch dem üblichen Gebrauch. Für die Art *angulata* Lamarck, 1819, ist allgemein der Gattungsname *Crassostrea* Sacco, 1897, in Gebrauch. Ich halte in diesem Fall sogar eine Abweichung von den Nomenklaturregeln für ausserordentlich verwirrend.

DOCUMENT 2/6

Extract from a letter, dated 2nd October 1951, from P. C. SYLVESTER-BRADLEY, B.Sc. (*University of Sheffield, Department of Geology, Sheffield, England*)

(published, 22nd May 1952, *Bull. zool. Nomencl.* 6 : 185)

May I respond to the invitation set out in your note Z.N.(S.) 365 concerning *Gryphaea* (1951, *Bull. zool. Nomencl.* 2 : 239—240).

The name *Gryphaea* Lamarck, 1801, is widely used, not only by specialists, but by general geologists. It includes species which are amongst the most common and best preserved fossils in existence. It has been the subject of well-known evolutionary studies. There are few names in palaeontology which stand in more need of protection than *Gryphaea* Lamarck, 1801, and I will strongly oppose any suggestion to suppress it under the Plenary Powers.

DOCUMENT 2/7

(a) Enclosure to a letter, dated 9th October 1951, from H. B. STENZEL (*University of Texas, Department of Geology, Austin, Texas, U.S.A.*) and GORDON GUNTER (*Institute of Marine Science, Port Aransas, Texas, U.S.A.*)

(published, 22nd May 1952, *Bull. zool. Nomencl.* 6 : 186)

The proposed suppression of *Gryphaea* Lamarck, 1801 (Class Pelecypoda) and the proposed validation of *Gryphaea* Lamarck, 1819, would have the effect of removing the *Gryphaea arcuata* Lamarck from the genus *Gryphaea* and of fixing the generic name *Gryphaea* on to "*Gryphaea*" *angulata* Lamarck. The following arguments are presented in opposition to this shift :—

- (1) The words griffin and *Gryphaea* are derived from the classical Greek γρυνπός (hooked) and are designed to denote a hooked, beaklike shape. Such a shape is characteristic of *Gryphaea arcuata* Lamarck and its congeners but is not characteristic of "*Gryphaea*" *angulata* Lamarck or its congeners. *Gryphaea* is a well-coined and well-chosen descriptive word for the former but not for the latter.

- (2) An examination of older and newer zoological literature, including paleontological and neontological literature, shows that *Gryphaea* has been used more often for *G. arcuata* Lamarck and its congeners than for *G. angulata* Lamarck and its congeners. Past and current usage, whether one would estimate it by number of pages or articles or authors, in paleontology and in neontology is in favour of retaining *Gryphaea* in combination with *arcuata* Lamarck.
- (3) Both words, *Gryphaea* and *arcuata*, have the same meaning (hooked), the one as a word derived from the Greek, the other as a Latin word. The Rules recommend selection of the type species of a genus by virtual tautonymy.
- (4) *Gryphaea* Lamarck, 1801, was validly proposed through definition and original list of species. The original list contains nine items, of which six, among them *G. arcuata* Lamarck, are defined by references to figures in previously published works and are regarded by us as validly proposed specific names. The remaining three items, among them *Gryphaea angulata* Lamarck, are neither described nor figured nor validated by references; hence they are regarded by us as *nomina nuda*. *Gryphaea arcuata* Lamarck, 1801, was validly selected as the type species of the genus by Anton, 1839. *Gryphaea angulata* Lamarck, 1801, being a *nomen nudum* as of that date, cannot be considered as a possible candidate for selection as type species of *Gryphaea* Lamarck, 1801, and such subsequent designations to that effect as may have been made cannot be regarded as valid. In summary, the genus *Gryphaea* Lamarck, 1801, and its type species *Gryphaea arcuata* Lamarck, 1801, are valid and stand on firm legal grounds (compare Dall, 1898; Hertlein, 1933; and Stenzel, 1947).

Therefore we recommend that *Gryphaea* Lamarck, 1801, and *G. arcuata* Lamarck, 1801, as the type species be placed on the *Official Lists*.

References

- Dall, W. H. (1898). Contributions to the Tertiary fauna of Florida, etc. : *Trans. Wagner Free Inst. Sci. Philad.* 3 (4) : 672—675.
- Hertlein, L. G. (1933). A new gryphaeoid oyster from the Eocene of California : *Trans. San Diego Soc. nat. Hist.* 7 (no. 22) : 277—278.
- Stenzel, H. B. (1947). Nomenclatural synopsis of supraspecific groups of the family Ostreidae (Pelecypoda, Mollusca) : *J. Paleont.* 21 (no. 2) : 174—175.
- Gunter, G. (1950). The generic status of living oysters and the scientific name of the common American species : *Amer. Midl. Nat.* 43 (no. 2) : 438—449.

- (b) Supplementary Note by G. GUNTER (*University of Texas, Institute of Marine Science, Port Aransas, Texas, U.S.A.*) in a letter dated 11th October 1951

(published, 22nd May 1952, *Bull. zool. Nomencl.* **6** : 187)

As an addendum to the enclosed statement which I have signed I should like to point out that *Gryphaea* has long been used by practically all paleontologists for a fossil genus of oyster which became extinct several million years ago. *Gryphaea arcuata* was the type species of the genus as set up by Anton (1839). The supposed validation of *Gryphaea angulata* as the type species of the living genus by Children cannot be valid because it was a *nomen nudum* of Lamarck, 1801. If Doctor Ranson's argument is that *G. arcuata* was confused and could not have been properly designated by Anton, it does nothing to validate *angulata*, an indubitable *nomen nudum*, and if *arcuata* is thrown out as the type species, it leaves the whole situation in utter and complete confusion.

Concerning the matter of usage, it is only in recent years that osteologists have come to separate the two common living genera of oysters. Taxonomists in this country and Japan who have been concerned with the question have all recognised that *Gryphaea* is not the proper name and have all stated that *Crassostrea* is the proper generic or subgeneric designation.

DOCUMENT 2/8

Communication signed by four members of the staff of the United States National Museum and by six members of the staff of the United States Geological Survey, transmitted by HARALD A. REHDER (*Curator, Division of Mollusks, United States National Museum, Washington, D.C., U.S.A.*) under cover of a letter dated 30th October, 1951

(published, 22nd May 1952, *Bull. zool. Nomencl.* **6** : 188—189)

It is the viewpoint of the undersigned that *Gryphaea* Lamarck, 1801, having been validly proposed, should stand, and that the type species is *Gryphaea arcuata* Lamarck, 1801, validly selected by Anton in 1839.